

Means test system under fire

by Ngain Crequier

The Committee of Vice Chancellors and Principals is to call for a phased withdrawal of the system of means testing student grants, it is understood.

Although the committee believes that a claim for outright abolition of the means test would be politically unacceptable for any government, it hopes to get a firm commitment so that the present system can be ended by about 1982.

The committee is preparing a detailed memorandum to present in the Department of Education and Science pointing out different ways of changing the system.

One favourite suggestion likely to be put forward is that the minimum grant should be progressively increased. Vice chancellors were largely instrumental in persuading

the Government earlier this year to raise the minimum grant for maintenance awards from £80 to £200.

Another possibility is to raise the starting point for parental contribution, which now stands at a residual income (after deductions for dependants, mortgages and superannuation) of £3,800 a year.

The committee is known to be looking at a proposal to bring forward the age at which a student is said to be independent and whose grant is therefore assessed on his or her own income rather than that of the parent.

It is likely that the committee will suggest changing the age from 25 to 23 as a start.

Although such a move would initially only affect a small number of students it would be an encouragement in relation to other students and would help to slow

up glaring anomalies in the system. Vice chancellors are quietly pleased that the value of the student grant has to some extent been restored in recent years but are concerned that these gains are lost if parents either cannot or will not pay their full contributions.

According to a DES-commissioned survey by the Office of Population, Censuses and Surveys in 1975, 84 per cent of students (excluding those living at home) had their grants reduced by an assessed parental contribution and of these 73 per cent did not get the full payments from their parents.

Almost 50 per cent of these students faced deficits of up to £75 and for a small number the deficit was £250. The cost of abolishing the means test is estimated at £55 million if account is taken of the child tax allowance reductions.

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Marked drop in number of overseas students

Entrants to postgraduate teacher training courses will outnumber their undergraduate colleagues for the first time this year but some other institutions have noticed slight falls in overall numbers of postgraduates.

Overseas student admissions to universities are markedly down in comparison to last year and universities are blaming this on changes in regulations which have made it more difficult to get grants. Some administrators say that higher standards of home students have also reduced overseas student intakes.

At Essex University there has been a 20 per cent fall in the numbers of new overseas undergraduate admissions. Survey University reports a fall of 28 per cent in overseas admissions which it says is due partly to the problems of finance and partly because of the increasing higher quality of home student which is being attracted.

Postgraduate numbers are slightly down, again because students' financial problems. Undergraduate numbers are on target.

Loughborough University has seen a very slight fall in overseas admissions and no real change in the postgraduate intake. Leeds University has seen a small drop in overseas students numbers.

Universities have had no problem in reaching their undergraduate targets. Many report great hungriness in science subjects. Swinburn, which has had difficulty for the last few years, in filling its science places, has noted a marked increase in science admissions this year.

Leeds says the physical sciences and combined studies in science have done very well. Essex, Reading

and Strathclyde also point to the success in engineering admissions. Some universities report a trend away from law studies and some of the social sciences. Arts remains steady.

Final figures for recruitment to BEd and Certificate courses are still to be completed at the Central Register and Clearing House but they are likely to be close to the Government's reduced target of 9,500 students. Fears that uncertain job prospects would lead to a slump have not been realized and early applications for next year's courses have increased.

The total of 9,363 students following Postgraduate Certificate in Education courses this year is almost identical to last year's figure of 9,392. There are at universities (fewer than last year) and 4,511 are at colleges or polytechnics (fewer than 1977).

Numbers joining the final Certificate courses or starting a BEd through the Clearing House will be considerably lower than the total for the PGCE but the total, approximately 4,000 university teacher training undergraduates will bring the total close together.

The trend towards the one-year postgraduate course, which will provide more than half of all new qualified teachers by 1981, has been criticized by the National Association of Teachers in Further and Higher Education, which believes that longer training is necessary. The association also fears the emergence of a two-tier system whereby secondary school teachers are trained on PGCE courses while BEd graduates go to primary schools to teach.

Mr John Hughes, who retired as his 65th birthday, is planning to continue his other activities in adult and continuing education. He is standing for re-election as president of the Workers Educational Association and will be continuing his work for the advisory council.

He was also invited to become one of six independent members of the Schools Council. He intends to write a book about the impact of the Council on his own school and its students.

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DES forced to reduce '1990s' forecasts as recruitment falls

Peter David

Government plans for the future of higher education have been scaled dramatically because the DES has had to come up with expectations.

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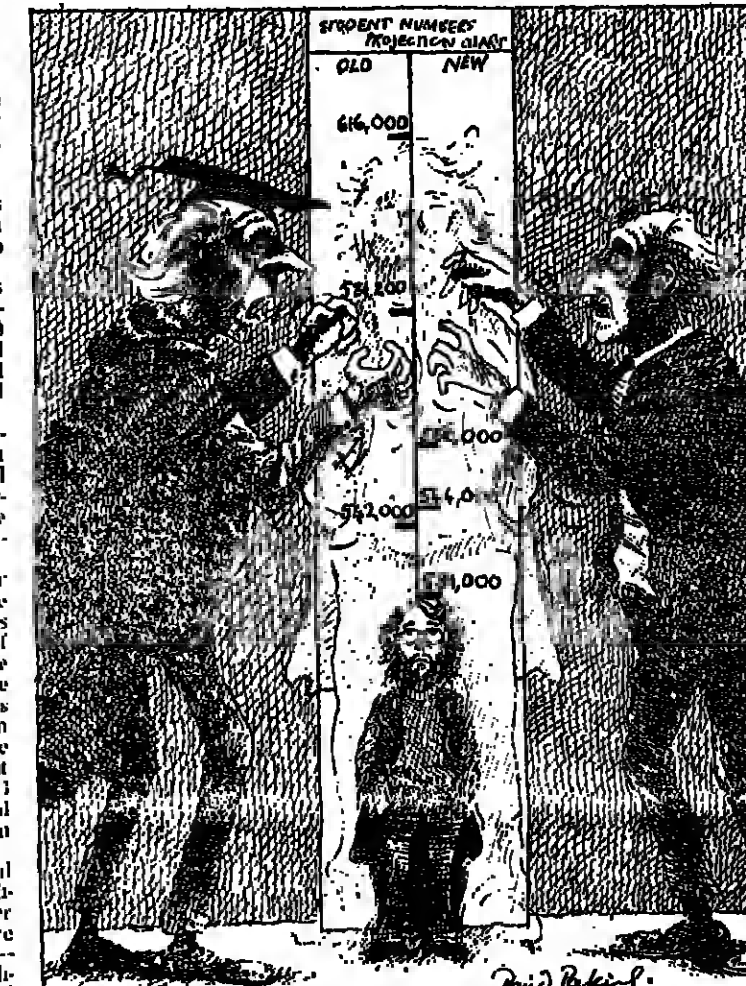
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A "low" projection anticipates continuing decline in the APR to about 12.6 per cent in 1982-83, bringing student numbers then to only 51,000 in place of the 54,000 in the earlier low variant.

The DES has, however, balked at the notion of revising its targets into the 1990s. It regards the APR as so unpredictable as to make sensible planning at that time-scale impractical. A single percentage rise in the APR before the early 1990s could add up to 31,000 students.

But the new projections for the early 1980s make it clear that the assumptions in the discussion document of a rise in the APR to 21 per cent by 1994 (high variant) or even

18 per cent (central variant) are highly optimistic.

One of the most significant factors in the disappointing number of school-leavers achieving qualifications which would enable them to enter higher education. The DES has cut its discussion document estimate of 155,500 in 1983-84 by 5,000.

The decision to retain for the present existing plans for the distribution of numbers between the polytechnics and the universities is being interpreted as a gesture of faith in the public sector where the bulk of the recruiting shortfall lies.

The University Grants Committee regards itself as on target—if not several thousand students ahead—for its share of the 560,000 total.

OU in spin over proposed finance switch

by Maggie Richards

The Open University is contemplating the transfer of funding responsibility from the Department of Education and Science to the University Grants Committee.

At present the OU is the only university in Britain to be directly funded by the DES, and has been since its inception nine years ago.

The proposal, however, has received a fairly hefty knock from within the university, which last week decided to oppose it. A final decision rests with the OU council, which is scheduled to meet for discussions next Tuesday.

The OU has consistently agreed that integration into the UGC system should eventually take place, but that the development of the undergraduate programme and the university's likely involvement in continuing education meant that the time was not yet ripe.

What seems to have prompted present consideration by the OU council is a recent request by the DES for a direct internal audit, which has been viewed as unacceptable in principle. A university spokesman refused to comment on this issue this week.

Advantages and disadvantages of cementing a new relationship with the UGC were set out in a paper for last week's senate meeting by Sir Walter Perry, the vice-chancellor.

Senate was asked by the Open University council to advise on relevant academic considerations. On grounds of the DES's approach to its tenth anniversary and had established itself sufficiently to be accepted as a recognised part of the entire system.

UGC membership, it was claimed, would also aid the research programme.

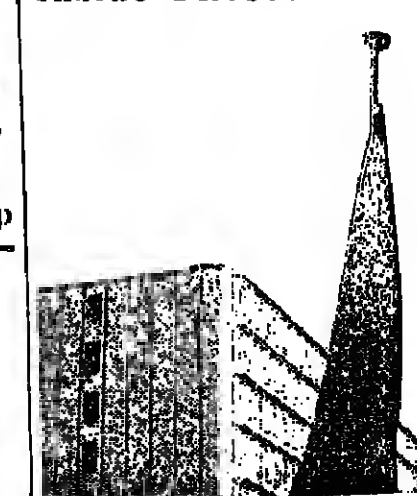
One of the main counter-arguments put forward was that the Open University had received comparatively good treatment from the DES in the past, with its recurrent grant estimated at £36m this year.

To become one of 45 universities competing for funding might substantially affect its position.

Fears were also expressed at senate about possible conflict with the interests of other conventional universities, particularly in the area of continuing education at sub-degree level, to which the Open University is heavily committed.

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Lecturers take action on code for redundancy

by John O'Leary

College lecturers are being presented with a programme of action to counter recent advice to local authorities on redundancy arrangements. This signals growing concern in the National Association of Teachers in Further and Higher Education over the implementation of the so-called Crombie Code.

The association has taken the unusual step of issuing all its branches with a detailed commentary of guidelines drawn up by the Local Authorities' Conditions of Service Board. The LACSAB document, published in the summer, was an attempt to standardize the approach to redundancies as a result of cuts in teacher training.

Widely differing approaches in closing colleges has also been a concern to NATFHE, which is still analysing replies to a questionnaire on the subject. But the association has criticized the LACSAB guidelines on several counts, claiming that they would only worsen an already confused situation since much of the advice could be challenged or tribunals and was at odds with previous court decisions.

In its commentary, NATFHE recommends branches to resist several of the LACSAB approaches if they are taken up by local authorities. On a number of issues branches are asked to report all developments to the association's head office, which will monitor progress around the country.

The major points of conflict are the suggestion that the Crombie Code might be extended to cover redundancies outside teacher education, the interpretation of which redundancies are directly attributable to national policy and the designation of jobs still meriting compensation despite the existence of safeguarded salaries. This last issue is described as the most contentious in the LACSAB guidelines and is likely to lead to a new rash of tribunals to establish which jobs within the same authority can be regarded as comparable.

Some areas, such as long term composition, remain to be tested in tribunals, while others may hinge on cases now being contested. Although the NATFHE commentary agrees with the advice given on many topics, the areas of disagreement are sufficient to suggest continuing clashes over many points.

NEXT WEEK

Eight-page special report on The Netherlands
David Jobbins profiles Huddersfield Polytechnic
Peter Worsley reviews Richard Hoggart's book on Unesco
The Proper Study of Psychology
Henri Cartier-Bresson exhibition at the Hayward



A City University student makes an offering to a marshal of this year's Lord Mayor's Show in London. A float from the university took part in the Lord Mayor's procession.

Minister shelves union finance plans

Plans to change the system of financing student unions are to be shelved for a year. Mr Gordon Oakes, Minister of State for Higher Education, has decided to put back the target date for the introduction of new arrangements from 1979 to September 1980.

An announcement on this, which is in draft form at the Department of Education and Science, follows months of pressures from the National Union of Students. With university vice-chancellors and polytechnic directors also uneasy about the original timetable, no agreement could be reached in time for consideration in the imminent announcement of the Rate Support Grant.

Mr Trevor Phillips, NUS president, met Mr Oakes last week to put against the union's case that more time was needed to consider how best to meet the requirements of public accountability and equity. Although the two-part system proposed by the DES was welcomed by

Mr Phillips' predecessor, Miss Sue Silman, the union's attitude has since cooled. Many university unions, in particular, fear that this system would lead to unnecessary conflict.

The postponement has probably come too late to forestall an emergency NUS conference on the subject. The union's executive is obliged to go ahead with the conference on December 2 unless the 13 local unions which called it change their minds. There is growing pressure on them to do so because of claims that the nearness of the regular conference only six days later will make it impossible for many delegates to attend, thus rendering the conference unrepresentative and unnecessary.

Alternative proposals on finance have now been agreed by the NUS executive, based on a combination of a system suggested during the summer by Mr Phillips and another package put forward by Sheffield University students. This would

allow this method of paying union fees to remain unaltered but would establish a national body, composed equally of the funding authorities and student representatives to recommend guidelines to local committees.

A committee of each institution would set the student union fee, taking into consideration guidelines on the minimum income and physical space recommendations for every college, the occupied areas of spending, the percentage range for each sector in the union's income would be expected to fall. The committees would consist equally of student representatives, the college authorities and the funding authorities.

This approach will also encounter strong opposition at the NUS conference next month. The National Organization of Labour Students, for example, has already criticized both the original Government plans and the alternative proposals, which it considers unrealistic.

Press campaign

Staff and students at London University are campaigning to prevent the sale of the Athlone Press. A decision which publishes the press, which publishes the press, which publishes the press.

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Polys get wind of courting campaign

by David Jobbins

The quinquennial visit to Leicester of the Council for National Academic Awards, and the polytechnics are expected following their bitter negotiations over the Teeside report.

"The CNAA intend to use the visit to give the polytechnic an opportunity to elaborate its views on the possible development of its relationship with the council," said Mr David Bethel, director of Leicester and chairman of the Committee of Directors of Polytechnics.

Relations between the CNAA and the polytechnics have been strained since the Teeside affair, when Mr Bethel accused the validating body of exceeding its charter powers. A request for an independent inquiry to be made by the CDP following the Teeside report.

Mr Bethel, originally, suggested the CNAA that it should take the opportunity of the visit to form

an opinion of Leicester as an institution in which it could have the confidence to encourage it to take more responsibility for academic standards.

This was rejected by Dr Edwin Kerr, chief officer of the CNAA, who felt it could not be a condition of a policy decision on the implications of the suggestion.

But the CNAA, obviously conscious of the delicacy of the situation, agreed to the use of the visit as a vehicle for the polytechnic to indicate how it would like the relationship to develop.

The visiting party, which will be on Leicester on March 22 and 23, may be tempted by this council to express views both on the way CNAA policy may change, and Leicester's role in the event of such a change.

"In this development the polytechnic leads the way, so that the outcome of the quinquennial review will not only be very important to us, but to all polytechnics, and may

be a milestone in the further development of the binary system," said Mr Bethel.

He added: "I believe the academic structure we have lacked by the relationship between the academic board and governing body, and between it and the local education authority, provides a well-validated mechanism to plan the future, to maintain and develop academic standards, and to meet enhanced academic responsibilities."

Meanwhile Leicester staff involved in drawing up the document which will be submitted to the CNAA, and in all the necessary consultations, are being asked to log the time they spend. Mr Bethel intends to log the cost of the whole operation to the polytechnic—and this too will form part of the submission.

The submission will take the form of a description of the polytechnic today, a report on the action taken following the 1974 quinquennial visit, and a list of the achievements and changes in the past five years, and changes in the future.

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Routledge and Athlone linked

Government 'needs firm strategy on literacy'

by Maggie Richards

A firm Government initiative similar to the one which created the Open University is needed to put adult basic education on the map. Efforts so far have only provided ineffective and short-term solutions to long-term problems.

That is the conclusion of the National Federation of Voluntary Literacy Schemes in its submission to the Advisory Council for Adult and Continuing Education.

The federation calls on the advisory council to support its demand for the establishment of a major new Government agency with responsibility for funding a national programme of adult basic education.

Dealing with adult literacy, it says the campaign has failed to persuade Government and local education authorities of the need for a long-term strategy.

The federation has produced its own six-point charter of proposals for provision:

- Mandatory grants to enable adults to attend full-time courses for up to three years.
- Paid release for literacy classes—students should not have to wait for broader legislation on paid educational leave.
- Immediate provision of literacy courses in workplaces.
- Centres where necessary.
- Literacy courses designed for specific groups—women, ethnic minorities, the disabled.
- Coordination between colleges and adult education centres, working to a consistent standard.

"Our students should have the same security of provision as that enjoyed by students in further and higher education", it states.

Looking at other areas of adult basic education, the federation says mathematics provision resembles that of literacy five years ago. Wide variations exist in the nature and quality of courses available in mathematics and English as a second language. There is also a substantial demand for part-time, fresh-start courses in a post-literacy level.

It reports highlights an additional three areas which might be included in the sector—social and political

education; making them more articulate, and study techniques. Advice and counselling services are seen as an integral element of a long-term strategy for adult education in general.

In conclusion, the federation states: "We believe that the scale of resources required to adequately finance a programme of adult basic education can only be guaranteed by the establishment of a major new Government agency on a permanent footing and analogous to the Training Services Department in its executive powers and the size of funds at its disposal."

"We note that the only initiative taken in recent times in the field of adult education that was launched with anything like the scale of finance required for basic education was the establishment of the Open University."

Another submission to the advisory council has come from the Workers' Educational Association. The WEA argues that adult basic education should not merely be regarded as a "survival kit" for the disadvantaged, but should aim to provide opportunities for adults to acquire a firm foundation for further development.

Its submission suggests the defunct Adult Literacy Resource Agency should form the model for a future long-term agency for the whole sphere of adult basic education.

Local education authorities should accept a special responsibility for adult basic education, says the WEA. Special forms of assistance should also be available to immigrants.

The WEA says its own programme of work in the field of basic education has been growing for a number of years, and now accounts for about 10 per cent of its total provision. This includes education in an industrial context, and courses to social and political skills.

"This commitment in adult basic education should continue, says the submission.

"It is an area in which voluntary workers could be actively associated, with the example of the literacy scheme before us. The continued involvement of the WEA may be particularly important, with its flexibility and its ability to respond to local demands."

Higher education conference

Royal Charters for polys urged

Local authorities should seek the help of the Department of Education and Science to acquire Royal Charters for their polytechnics, Mr David Beith, chairman of the Committee of Directors of Polytechnics, said this week.

He told a conference at the Loughborough University of Technology that despite the difficulties polytechnics had experienced at the hands of local government authorities, they should retain responsibility for higher education. But to prove their responsibility they should seek charters for their polytechnics.

A statement by even one local education authority to this effect would revolutionise the maintained sector and remove the petty interference in academic affairs which is indulged in by some local authorities," he said.

Earlier Mr Beith called for a relaxation of the control exercised over polytechnic courses by the Council for National Academic Awards. The CNAA had helped to maintain credible standards in the polytechnics, but after 10 years of tutelage it was time for polytechnics to take more direct responsibility for their own courses.

"One way this could be achieved is by the Privy Council granting charters to individual polytechnics which confers the right to award their own degrees with each degree accredited by the CNAA or a successor body."

"I see no reason why those degrees should not be re-accredited every quinquennium, and I see no reason why all degrees in all institutions should not be subject to accreditation."

Mr Beith claimed that the erosion of standards suggested that institutions had the main responsibility for determining their own standards, standards were likely to be at risk.

Later the conference was warned that a move by polytechnics away from part-time and sub-degree work was beginning to jeopardize their comprehensive tradition and could do irreparable harm to higher education.



Professor Wallace—polytechnics and universities' work is different

Professor Bill Wallace, chairman of the education and development committee of the Association of University Teachers, said that between 1970 and 1975 the proportion of polytechnic students on first degrees had risen from 46 per cent to 58 per cent.

During the same period the proportion of advanced work rose from 50 to 95 per cent; the proportion of full-time students on advanced courses rose from 53 to 63 per cent and the proportion during arts courses fell from 22 to 10 per cent.

This swing away from comprehensiveness and a concentration on degree and full-time work would undermine the valuable role of polytechnics in linking the world of higher education to that of the universities, Professor Wallace said. Just when demographic changes were making recurrent education important, the polytechnics appeared to be abandoning that role.

Professor Wallace urged polytechnics to accept that although there were areas of overlapping activities, polytechnics were different types of

institution from universities. Although polytechnics did research, for example, they did not have the same status as the universities.

In 1976-77, he said, research accounted for £2.5m, 12 per cent of polytechnic expenditure. A survey of universities spent £5.5m, 12 per cent of their income, on research. In individual polytechnics, research expenditure ranged from £7,000 to £400,000. In universities, the range was from £140,000 to £4.5m (excluding London).

A similar pattern was followed by the research councils, which funded 98 per cent of their research in universities and only 2 per cent in polytechnics. It can be argued that the distribution is wrong, Professor Wallace added, "but that is the nature of the expenditure."

The greater university-style higher level work was also reflected in the number of postgraduate students. Between 1970 and 1975 the number of polytechnic postgraduates rose by 175 per cent compared with 17 per cent in the universities.

One of the most important features of the polytechnics' development was the body of research which had been threatened. Professor Wallace said, in 1975 39 per cent of polytechnic full-time students were on research work, and 37 per cent of degree students were on research work. This was a significant proportion, he said, and a significant proportion of the research was of high quality.

But the gradual movement of polytechnics away from part-time and sub-degree courses might be a reason for the public sector to look out on student numbers, he said. The 1972 White Paper said that the public sector should be able to meet the needs of the population, and the maintained sector, he said, was not doing this.

Professor Wallace urged polytechnics to accept that although there were areas of overlapping activities, polytechnics were different types of

Reports by John O'Leary

Student finance

Call to simplify grants system mixture

Major changes are needed in the system of student grants and tuition fees to make them less complex and more consistent. This was the main conclusion of last week's conference on student finance, held at North London Polytechnic.

More than 150 academics, educational administrators and students attended the one-day event, sponsored by the Society of Research into Higher Education, the National Union of Students and The TUC. Two plenary sessions and five specialist groups examined the British system of grants as it affects a wide range of students.

Although delegates did not agree on alternative financial arrangements, there was general dissatisfaction with the existing mixture of grants and fees. Mr David Croome, an assistant director of NUS, said afterwards that the conference had demonstrated the need for a national inquiry to establish national principles for the award of grants in higher education.

The multi means of concern, which were raised several times, were the overblown of the discretionary awards system and the growing of tuition fees as an element of student support. In both cases, large numbers of students, particularly those from overseas, are likely to be priced out of higher education because of the regulations.

A group discussing the problems of overseas students agreed that they should be the responsibility of central government, rather than of local authorities as at present. It was felt that a new policy, based on the needs of students, should be developed, taking account of educational aid to other countries as well as the allocation of grants.

Other sections considered particularly vulnerable to government policy were mature students and postgraduates, whose courses were often in a precarious state because of their smallness and the discretionary nature of their grants. Fee levels were considered a particular deterrent to mature students, many of whom would be likely to join non-designated courses if Model E of the DCS Brown Paper "Higher Education" was adopted.

However, the greatest source of discontent was the dual system of mandatory and discretionary awards. Examples were given of the variations between local authorities and of wrong interpretations of regulations, but there was no agreement on allocation of grants should be taken at national or local level.

Reports by John O'Leary

University of Surrey

Weas Inc.

The University of Surrey has set up a private limited company to exploit the ideas, inventions and designs which exist or may be developed within the university in the future.

The company, University Business Ventures Ltd, will be based at the University of Surrey, and will be managed by Mr Ken Jones, who will be its managing director. Mr Jones, a civil engineer, is already a director of a number of companies.

A spokesman for the university said: "The company will enter into contracts with the originator of an exploitable idea, and will then share the profits with the originator. It will also be concerned with the development of the idea into a commercial product, and will then share the profits with the originator. It will also be concerned with the development of the idea into a commercial product, and will then share the profits with the originator."

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Sexes concur on science ability

Spain Crequer

In eight women questioned in a survey at the University of Manchester, all believed that men made better scientists. None of the students questioned, male or female, thought that women made better scientists, and the majority thought that men made better scientists.

The students were asked, if they thought there should be more women students, how could the position be altered? Mr Harrison said: "It is interesting to note that women respondents scarcely mentioned the need to change society fundamentally. Many more practical weaknesses or points were made, especially with reference to school. Only three respondents advocated positive discrimination and only one mentioned the need to increase the number of women teachers within UMIST itself."

One of the recommendations arising out of the survey is that at the very least, women applicants whose qualifications are equal to those of male applicants should be encouraged. The questions as to why there are so few women academic staff should be raised.

It is also suggested that the institute should look at the prospectus it gives to schools. "The prospectus for UMIST's new, high-flying course in engineering, manufacture and management is concerned with the five Ms—men, money, materials, methods and machines. A 1976 prospectus for postgraduates carries a series of photographs which, it is said, subtly divides the sexes and shows women in the knitting laboratory."

According to the survey, inadequate nursery provision is preventing applications from women with children.

UMIST Women's Survey. Lyndon Harrison, research officer, October 1978, published by UMIST Union.

More than half the women said they had gone to university principally to extend their education and personal development. But for two in five men, obtaining a qualification and for one in five men, becoming trained for a job, were the top priorities. One in 12 men did not know why they had gone to university but all of the women were able to give a solid reason.

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Oxford opinion against proposed N and F levels

Congregation of Oxford University will be asked on December 5 to tell the Standing Conference on University Entrance that there is "a remarkable consensus of opinion" against the proposals for N and F level examinations.

In submitting a general resolution to this effect, the Hebdomadal Council announced in the University Gazette on Thursday (November 16) that the consensus was arrived at after consulting more than 40 bodies in the university.

An explanatory note says that since 1974, there has been a much stronger and more general questioning of the basic assumption underlying the N and F proposals, namely that breadth of examined study is of overriding importance in the sixth form. The university remains convinced that for many able 15 to 16-year-olds, the opportunity for specialization afforded by A levels represents not a straightjacket, but both a highly satisfactory framework for the development of their own interests and an appropriate preparation for degree work.

The N and F proposals are widely seen as an unsatisfactory compromise between two schools of thought—the one advocating the development of a six-form examination towards a five-subject model, and the other favouring developments based on the retention and improvement of A levels.

The university overwhelmingly supports the latter approach. Only in fine art, biochemistry and geology has there entered a preference for N and F levels.

The annual experience in Oxford of examining nearly 7,000 candidates who make Oxford their first choice, does not suggest that problems of inadequate breadth or premature choice—where they occur—are on a scale or of such severity as to warrant the overthrow of the present system. It is in any case questionable whether the N and F proposals could resolve such problems.

In precise F level performance would become the principal factor determining university entrance. Candidates with two F levels would, however, have a narrower choice of university courses than those with three A levels.

Some schools, especially those with well-established, academic sixth forms, would accordingly enter candidates for three or more F levels.

In other schools the N-level programme would tend to dominate the curriculum with deleterious effects on the candidates' performance at F level and their preparation for other favouring developments based on the retention and improvement of A levels.

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University to sever links with teacher training college

Oxford University is proposing to cut all its examination links with Westminster College, Oxford's teacher training establishment.

The university wants to stop validating the college's postgraduate certificate of education as soon as the college has made arrangements with the Council for National Academic Awards.

Westminster College has accepted the decision of the university to stop validating the degree of Bachelor of Education after October 1, 1980, except for those candidates who have to re-sit the examination.

The Principal of Westminster College, Mr D. W. Compton, says he is upset over the certificate decision.

The decision, he said, had been taken without the cooperation of the college, which has always valued its association with the university. "We have always felt that there are solid academic reasons for continuing the association in the postgraduate area, because in some ways, we complement each other."

Three of the original four colleges—Culham, which closes at the end of Trinity Term next year, Lady Spencer Churchill College, now part of Oxford Polytechnic, and Milton Keynes, which has ceased registering its BEd students for the Oxford degree and looks to the CNAA for validation—will have to formalise their association with Oxford after 1982.

The university's attitude must be influenced by the fact that the two bodies say the Westminster certificate is different from the one taught in the Department of Educational Studies, the staff of which play little part in validation.

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How to store students belongings safely and efficiently

Link lockers are built for a tough life. They will take anything your students can throw in them or at them, while at the same time incorporating elegance, versatility and colour in one system.

A shelf at the top of the locker provides space for small personal possessions and a hook or short rail with hooks are provided for coats and jackets. The locker has a standard dead lock and two keys or a three point lock as an alternative. To find out more get in touch with

Draft proposals for a new procedure to cope with such students are now being considered. They would be derogated after failure to obtain any credits in three consecutive years, or to obtain more than one credit over four years. The procedure would be accompanied by an official warning and the right of appeal, but any student eventually derogated would be barred from taking further courses.

Another group of students will also be affected by the new proposals, the 68,000 who have enrolled and are eligible to take courses but for various reasons have opted out to do so.

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Engineering apprentice plan attacked

Any new scheme for training engineering apprentices must maintain existing opportunities for students in further education colleges to be pursued to current levels, the National Association of Teachers in Further and Higher Education says.

Criticising plans forwarded by the Engineering Industry Training Board, the association says: "NATFHE would be opposed to any reduction in the present period of further education."

The training period should be related to the needs of employers and not to specific age. "The period of further education is already too limited and should probably be extended."

NATFHE insists that any new arrangements must make sure that successful students are able to follow appropriate further education courses—including those organised through ITC. The board's proposals for streamlining apprenticeships are also criticized for the suggestion that schools should take on training 14 to 16-year-olds in specific engineering skills.

Group to define life skills

Confusion over the term "social and life skills" used by many teachers and in official educational or non-educational policy is being tackled by a group of teachers and educationists.

The group aims to produce an analysis of the current situation to help inform on scheme organizers in making decisions and making plans in their local circumstances. Rather than attempting to be prescriptive, it will describe alternative views and their consequences and implications.

Developments to provision for the 16-19 age group are necessarily happening—so quickly—that the moment that teachers, trainers and others directly involved with young people are too busy coping up with it to have time for "life skills" or to have time for "life skills" or to have time for "life skills".

The term "social and life skills" came into common use with the publication of the Manpower Services Commission's *Instructional Guide to Social and Life Skills*.

It was also intended that the study group's work should complement a major review of research and development in social education being undertaken by the National Institute for Careers Education and Counselling, with a grant of £15,000 from the further education unit from next year.

NICE's main aim will be to provide a review of research and development in social and life skills which it will attempt to review and analyse approaches and developments in social education.

Working party examines wider mandatory awards

A local authorities' working party is looking at ways to broaden the scope of mandatory awards. Mr Bob Morris, under-secretary for education at the Association of Municipal Authorities, told the conference.

Mr Morris said the working party, set up by the Council of Local Education Authorities, had excluded the idea of student loans and the question of parental contributions to grants from their discussions because no action was considered feasible on either. Instead, it was seeking workable adjustments to the present system to propose to government.

It was not surprising that there had been cuts in spending on discretionary awards, Mr Morris said, because this was one of the few areas in which education authorities could economize. But they recognized that anomalies did arise and attempts to simplify arrangements while still retaining local decision-making. Some sifting pro-

Grants system changes 'will lessen efficiency'

By Ngino Crequer

Recent changes in the system of allocating grants to universities, making them inclusive of fees for full-time students, will lead to less efficiency, Sir Charles Carter, vice-chancellor of Lancaster, said in his annual report to the council.

Sir Charles said that in making the change, the University Grants Committee removed "one of the few remaining incentives to efficiency in the university system".

A university which took extra students would now find its UGC grant element in its total income correspondingly reduced.

He said if the change in policy were a pre-emption for the expected fall in student numbers it was premature. If it were the result of a view that universities, given an incentive to be efficient, try too hard and reduce standards, it was improved.

"The sinister implication of the change is that, if it renews internal incentives to efficiency, the necessary guarantee of wise stewardship of public money must be provided by detailed central control", he said.

"The central power of the UGC is already in danger of overburdening the wisdom available for its application, and a further increase to that power is a matter for regret."

Sir Charles said that the small increases proposed in student numbers and in money per student allowed, after the period of financial stringency, some room for freedom.

"That freedom must be used well, since the forecasts for later in the 1980s and 1990s give little hope of any such room for manoeuvre. The last chance in this century to correct errors, to adjust loads, to round off teaching programmes and to strengthen new initiatives may be just beginning."

"The prospect for 1990 is of an aging staff with few opportunities of mobility, and a declining flexibility provided by rationalization."

He said there was ground for concern about the situation in the natural sciences where departments had been held back because of static staff and a limitation of resources. Younger scientists had great difficulty in getting university jobs.

Sir Charles said there was still much to be done to relate the curriculum and research in the natural sciences to the needs of the community and departments would be stimulated by increasing their contact with the non-university world.



Sir Charles Carter—concerned about the wise exercise of UGC power.

Warning on language teaching

by Robin McKie
Science Correspondent

There are to be moves to increase the modern language content of technology-related courses at Britain's higher education centres. Education Secretary Mrs Williams told a House of Commons select committee last week. She warned that the inability of our technologies and industrialists to cope with foreign languages was limiting our attempts to sell products overseas.

"Our modern language teaching is in rather a worrying state," Mrs Williams said. "We are not at the same level as other countries in respect of our capacity to use languages for commercial, marketing, technical and other crucial purposes."

She said the country as a trading nation cannot risk a growing decline in people with a language competence. Already the numbers of specialists in most languages were dropping—except French which was merely holding its own.

Under the EEC, Mrs Williams said, it was in our interest to back the scheme because, among other things, it would mean more places for our students to study abroad and the EEC would be hearing some of the costs of study. Last year, 1,000 students of

Mrs Williams was answering questions from members of the Select Committee on European Legislation on three resolutions which proposed that modern language teaching should be improved; that children should be taught more about the EEC; and that students from Community countries should enter higher education centres on the same basis as students from the home country.

However, these proposals did not represent a legally binding approach by the EEC. "We are not talking about individual projects which support individual projects in which the Community makes a contribution," Mrs Williams said. She told the committee that the EEC was proposing several pilot schemes, which would cost about £3.6m.

Mrs Williams said it was in our interest to back the scheme because, among other things, it would mean more places for our students to study abroad and the EEC would be hearing some of the costs of study. Last year, 1,000 students of

modern languages were unable to find places on the continent to study the language of their choice. A total of 2,400 did find places, however.

The EEC was also seeking an expansion of the teachers' assistant scheme under which students from other countries, usually from Germany, helped out in British schools. Recently their numbers in the United Kingdom had dropped from 4,300 to 3,400 in spite of the fact that the assistants had a "marked effect" on the success of pupils taking modern language exams.

Under the EEC scheme, an extra 250 assistants a year would be able to take up places in colleges of education and business courses as well as in schools.

However, Mrs Williams warned that the department could not give an undertaking that Community students would be admitted to higher education institutions on the same basis as home students because of the present United Kingdom system of discretionary and mandatory awards, although this was now being examined.

What students expect from jobs

by Ngino Crequer

The average student seeks a job which pays well, demands creativity and originality, will be adventurous and will make use of his special abilities and talents. It should offer a stable and secure future, with promotion prospects and without too much supervision.

Stability and prestige are not important but most students want to work with people and be socially helpful. These are the initial conclusions of a two-year analysis of "Undergraduate Attitudes to Employment" carried out at the department of educational research at the University of Lancaster.

The project was set up to examine attitudes to employment in industry, commerce and public service, to determine how attitudes are affected by subjects studied, and where they are studied and whether attitudes change if on establishments has a high or low proportion of graduates going into industry.

Researchers selected four subjects—civil engineering, physics, mathematics and economics—and interviewed or gave questionnaires to 1,243 British male undergraduates in universities and polytechnics.

"They found that attitudes did not vary greatly according to subject but that attitudes of civil engineers seemed to be more extreme in their views. They were the least likely to change jobs and the least concerned that their work should be free from supervision."

There were some "idiosyncratic" differences between responses from different establishments, but records of high or low graduate recruitment into the industrial sector seemed to make no difference in attitude.

Students mentioned a wide range of jobs in which they were interested and their choices were influenced by family, previous work experience, degree course placements and subjects studied. Many were interested in research as a career. Many wanted to become socially useful, without becoming social workers.

The students were reasonably ambitious: 98 per cent thought they would end up between the middle and top grades of their professions. Nearly a quarter of those who answered this question (some said they were not "career people") expected to get to the top. Economics students were the most ambitious and mathematics students the least. Polytechnic students were slightly less ambitious than university students.

The study showed that students had stereotyped views of the employment sectors. Industry was most favoured and commerce the least. About one in three rejected the idea of working in the education sector. Polytechnic students mostly favoured industry and least favoured the public sector.

Undergraduate Attitudes to Employment: Analysis of the First Year's Work. The University of Lancaster.

Canada keen to receive 500 Chinese students

North American News



China: anxious to gain new technology

China suddenly anxious to receive its scientific and technological development by sending thousands of students and scientists to the West, Canadian universities are keen to receive their share of Chinese students.

The People's Republic has asked Canada to take about 500 Chinese students a year, and Donald Johnston, Secretary of State for External Affairs, has replied that Canada is quite ready to do so.

However, whereas the United States and China have already concluded an agreement under which 30,000 Chinese students will be placed in American universities next year, discussions over the Canada-China deal are still in progress.

As some ways, educational negotiation between China and Canada is to be easier than between China and the United States. For the People's Republic has had full Chinese representation in Ottawa for several years, while it has only a liaison office in Washington, because the United States remains diplomatically relations with Taiwan.

China and Canada have also concluded a student exchange programme which has run successfully for six years. Twenty-five Canadians go to China—mainly in the social sciences and humanities through a network of exchange agreements with Chinese universities and research centres.

Chinese came to Canada. The latter are mainly linguists studying English or French, in contrast to the wave of Chinese students who will be after advanced scientific and technological training.

Therefore, the Chinese have more experience of dealing with Canadian than American universities. They had had no educational exchanges with the United States for 30 years ago.

On the other hand, the sensitivity and complexities of the Canadian political structure are enough to confuse any foreign government hoping to reach an educational agreement with Ottawa. Under the Canadian Constitution, all responsibility for education rests with the provinces, and the Federal Government has no department of education—so dealing with the Department of External Affairs and the Department of Industry, Trade and Commerce, and with the 10 provincial governments (individually and through the council of ministers of education).

The negotiations are taking place between Ottawa and the provinces under a contract to educate 500 Chinese students in Canadian universities and colleges. The provinces are keen to receive the students, but the Federal Government has to finance the cost of their education.

However, the Chinese have indicated that they are keen to finance the cost of their education. They are keen to receive the students, but the Federal Government has to finance the cost of their education.

The lecturer, Stanley Osevit, was also awarded seven years' back pay—about \$140,000.

Groups urge Supreme Court to overturn state's control

by Clive Cookson

WASHINGTON
Thirty-two educational and civil rights organizations have joined together to urge the United States Supreme Court to overturn a Pennsylvania law that gives the state legislature control over Federal education, research and welfare programmes in the state.

National education leaders such as Jack Peltason, president of the American Council on Education, and John R. Ror, and Al Shanker, heads of the country's two big teachers' unions, held a joint press conference here to emphasize the constitutional importance of the issue.

They said that if the Supreme Court does not quash the law passed by the Pennsylvania legislature in 1976, other states anxious to extend their political power will follow Pennsylvania's example, endangering \$80 billion a year in Federal aid to schools, colleges and universities, research institutions, and so on.

Pennsylvania's law requires all state funds given by the federal government to public agencies including grants to students and researchers or public colleges to be deposited in the state's general fund. The legislature then has to "reappropriate" each item before the money can be spent.

The Governor of Pennsylvania, Milton Shapp, started legal action to have the law declared unconstitutional soon after it was passed, when the legislature refused to reappropriate the money. The Federal Law Enforcement Assistance Administration for a special prosecutor's office in Philadelphia. As a result, the office, which Mr Shapp wanted to continue in operation, had to close.

The Pennsylvania Supreme Court ruled against Governor Shapp, saying the state constitution did give the legislature the right to control

Federal funds. Therefore, Mr Shapp has taken the case to the United States Supreme Court, with the backing of a "friend of the court" brief from the 32 national organizations. The United States Attorney-General, Griffin Bell, and Health, Education and Welfare Secretary Joseph Califano, have been asked to intervene on their side, and many observers expect them to do so.

Mr Shapp and his supporters argue that the legislature is violating two articles of the American constitution. First, the "supremacy clause", invalidating state laws whose effect is to nullify programmes authorized by Congress; and secondly the power of Congress to "provide for the general welfare of the United States".

But most of the organizations that have intervened in the case are less interested in these weighty constitutional questions than in the damaging practical effects of the Pennsylvania law. Although on other state legislatures have taken such sweeping control over Federal funds, most legislatures have given themselves some power to review Federal spending in their states.

And Allan Ostler, president of the American Association of State Colleges and Universities, named 10 states where Pennsylvania-style controls are under consideration.

"Public higher education will be doomed" unless the Supreme Court clearly overrules state reappropriation laws, claims Al Shanker, president of the American Federation of Teachers. For state colleges and universities will be unable to receive Federal aid without approval by the legislature—which can cause long delays—while independent institutions get Federal funds directly.

In 1976 and 1977 the Pennsylvania legislature's reappropriation process delayed Federal student aid so long that students in state colleges star-

ted the academic year unsure whether they would get the basic grants they were entitled to. The colleges have attributed their unexpected fall in enrolment last year to the uncertainty this caused, Mr Ostler said.

"Another result is that research grants in health, science, training for the disadvantaged and minorities, and other grants, have been delayed, or colleges have not been able to meet both state and Federal deadlines and have not been able to receive grants. This has hurt both the national effort to carry out such programmes and the state effort—and lost the state and its people money," he added.

"Colleges in Pennsylvania report a vast multiplication of paperwork and bureaucracy."

A particular problem arises if state colleges or other institutions win unexpected Federal grants when the legislature is not in session. The time limit on the grant may not allow the college to wait for the legislature to return and reappropriate the money—which then has to be returned to Washington, unused.

Pennsylvania's law makes their financial dependence on the state legislature almost total—it not only decides the institutions' basic operating budgets (interestingly Pennsylvania is the only one of the 50 states where a substantially cut in real expenditure on higher education over the past two years) but also has the power of veto over the Federal funds they used to give colleges some financial independence.

Clive Cookson, North American Correspondent, The Times Higher Education Supplement, National Press Building, Room 541, Washington DC 20045, Telephone: (202) 635 6765.

Western Australian
Institute of Technology

School of Health Sciences

Head of Department—Community Health Science

The Department of Community Health Science is a newly created department responsible for degree courses in Environmental Health and Nutrition, the Graduate Diploma in Dietetics, and the School Graduate Diploma in Health Sciences (options in education, management, community health and clinical specialization). There are 10 full-time academic staff positions supported by part-time staff for approximately 170 students.

Applicants should possess higher qualifications in one or other of environmental health, public health, nutrition or closely related fields.

Head of Department—Occupational Therapy

The Department offers a Bachelor of Applied Science programme in Occupational Therapy, and participates in the School's Interdisciplinary Graduate Diploma programme in Health Sciences. There are 14 full-time academic staff positions supported by part-time staff for approximately 180 students.

The Department of Occupational Therapy is located, with the Department of Physiotherapy, in the grounds of the Royal Perth (Rehabilitation) Hospital at Shenton Park, about 20 kilometres from the main campus. A close relationship is maintained with the hospital and other health professionals as part of the teaching programme.

Applicants are required to be a Registered Occupational Therapist holding a postgraduate qualification in a relevant field with professional and tertiary experience.

Responsibilities: Each Head of Department will be required to provide academic leadership, both educational and professional, to coordinate academic and administrative operations and further the Department's involvement with other health professionals and the community.

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When applying please quote reference HES.

Working parties set up on OU and its potential output

by Maggie Richards

The future involvement of the Open University in the area of continuing education is to be investigated by several working parties set up last week.

Working parties to examine the university's present contribution to continuing education and its potential output were set up at the first meeting of the OU in its new building.

The collaborative nature of the venture was stressed by Sir Walter Chace, the university's vice-chancellor.

Of the 34 members of the delegation, 10 are representatives of external bodies. They include Mr Roy Jackson, of the Trades Union Congress education department; Dr Eric Midwinter, of the National Consumer Council; Mr Brian Groombridge, director of London University's extra-mural department; and Mr

John Tomlinson, director of education for Cheshire.

The working party was established in April as a result of the Venables Report on the role of the OU in continuing education. It was given the task of plotting a course for the university to follow, and advising on a suitable permanent framework for the future.

The working parties will examine the OU's present work in the areas of in-service education for teachers, community education, and professional training in health and social welfare, and investigate other sectors in which the OU might collaborate with other adult education bodies.

The interim delegation is scheduled to meet again in March, when it is hoped some progress will have been made by the working parties. The delegation has been given up to two years to suggest a future pattern of continuing education provision for the OU.

Oxford mental health worries

Oxford students have called on the university to provide better care on mental health matters, particularly regarding stress as an occupational hazard of university life.

A flysheet setting out the views of the student union's health and welfare committee was circulated to students by the university Gazette last weekend (Nov 26). It claimed that the university has a "lamentable record of inaction".

The recommendation of a 1967 committee under the chairmanship of Lord Bolckow, Master of St Catherine's College, for a central student mental health service was not implemented. A second report in 1971 made proposals designed to preserve the college doctor system, to have an integrated service which

can be subject to a constant process of evaluation and monitoring to ensure the optimal distribution of resources", the flysheet says.

The union's contribution to the study of mental health will be a survey of 1,000 students to see how well they manage themselves. "We are moving up the political agenda. All the political groups in the Student Union now support the introduction of centralized medical facilities."

As a first step, the university is urged to set up an adequate system of care. The flysheet quotes the example of Harvard which has 37 full-time psychiatrists. It also advocates the participation of students in the health programme, as is the case in America.

Available evidence suggested that stress was of considerable dimension in university life.

Science boost for minorities

The National Science Foundation is to set up a second Resource Centre for Science and Engineering next year in its campaign to increase minority representation in American science.

The first centre, announced in the summer, was Atlanta University, serving a network of black schools and colleges in the south-eastern states (THESE, August 2).

The NSF went through an elaborate multi-stage selection process this year before choosing Atlanta, to minimize the inevitable competition for the one centre originally funded by Congress.

The authorization to spend another \$2.8m on a second centre allows the NSF to restore the balance, and, rather than hold a new competition, the foundation will give first consideration to the two institutions in New Mexico which lost out to Atlanta in the first stage last year.

The foundation has also announced awards totalling \$4.5 million to 26 colleges and universities under its other scheme to expand the flow of black, Hispanic and American Indian students into science and engineering.

Those grants, worth between \$100,000 and \$250,000, are made annually under the Minority Institutions Science Improvement programme to upgrade science teaching in a pool of about 200 colleges and universities whose student bodies are composed mainly of minority races.

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Lecturer gets job back

A lecturer who was fired from San Francisco State University during the politically turbulent days of the late 1960s has been ordered by the California Supreme Court to be rehired by the university.

The lecturer, Stanley Osevit, was also awarded seven years' back pay—about \$140,000.

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Top division management troubles

able test. The British
Advancement of Science
meeting earlier this year

Animals in training. From test.

He wants to see Huddersfield develop into a moderate-sized institution with about 5,000 students, offering vocational courses but also

demie board undoubtedly oppose remedying it. He also understands but does not agree with the argument that academic staff members should be elected rather than being ex-officio appointments.

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16901. 2

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Drawing on a wealth of up-to-date background references from the work of French social scientists, government officials and planners, Professor House provides an applied perspective to regional geography, offering a critique of the planning of resources, the environment regions and cities in post-war France. This book will be of great interest to town and country planners, as well as to students of geography and of the related social sciences.

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METHUEN

BOOKS

Industrial Europe

Eastern Europe
by David Turnock
London, 1978
ISBN 0 7129 0795 5
Contemporary Industrialization:
spatial analysis and regional development
edited by F. E. Ian Hamilton
London, 1978
ISBN 0 582 48592 4
Industrial Change: International
experience and public policy
edited by F. E. Ian Hamilton
London, 1978
ISBN 0 582 48593 2

Terms like "economic geography" or "industrial geography" (as exemplified by the Dawson "Studies in Industrial Geography" series) make many of today's geographers cringe, for they seem to be the residue of a backward-looking, purely descriptive approach to the subject, far different from such fashionable fields as urban studies. Perhaps we cringe too easily; basic information on the spatial distribution of economic activity is, after all, necessary for various practical purposes.

For example, anyone wishing to know what is going on in Eastern Europe, not only geographically but economically and politically, will welcome the information contained in David Turnock's book. He sets industrial developments in a historical perspective, he comments shrewdly on the post-war planning systems and, usefully, with the area as a whole rather than splitting it up country by country. The book is not intended as a contribution to the theory of industrial location, but is solidly useful as a source of information.

By contrast the two volumes edited by Dr P. E. Ian Hamilton are specifically directed to the theory and practice of examining the spatial distribution of economic activity. In his introductory essay on "The changing milieu of spatial industrial research" Ian Hamilton rejects as insufficient the attempts from the time of A. Weber onwards to erect theories of industrial location based essentially on the single point under conditions

of perfect competition. Even the theoretical-quantitative approaches of the 1950s and 1960s are felt not to have changed the intellectual climate in a fundamental sense, since they essentially accepted the existing social and economic order. Today, however, "the spatial study of human behaviour... has entered into an exciting period of vigorous debate, of searching enquiry, of re-evaluation."

The excellent review most of all in the realization that the results of spatial economic organization in advanced capitalist societies involve the increasing dominance of large corporations with a monopolistic hold on markets, and not at all the free competition of firms in a theoretically perfect market. Many would agree with this observation, but to Ian Hamilton and many colleagues it leads to the belief that the understanding of the force of these large-scale economic organizations is the key to understanding economic processes and patterns.

Not all who follow Ian Hamilton view sympathy will be entirely convinced of the need for a single overarching theory of a Marxist nature. Dr Hamilton himself admits that the appreciation of Marxist economic theory tends to be inhibited by political fears related to the "translation of Marxist-Leninist into practice with the 'siege situation' of the Soviet Union during its phase of 'socialism in one country'. Some readers may feel that more concrete and useful results may be achieved by smaller conceptual advances in more limited and defined fields. If so, they will be entirely happy with the contents of the two volumes, which were far the most part contributed to by the working group on industrial geography of the International Geographical Union.

As usual with such compilations, the contributions tend to escape from the efforts of the editor to give them a measure of intellectual coherence, offering a fairly orthodox and systematic approach to problems of industrial location and regional planning. Of the two volumes, *Contemporary Industrialization* is primarily directed to the spatial behaviour of current industry in Europe, Asia, North America and the developing world. The companion volume *Industrial Change* is more concerned with the impact of government policies on industrial location and regional development.

It is curious that not the least pragmatic, one might even say nostalgic, contributions, which are essentially concerned with measuring the results of the centralized planning of economic activity. These contributions show rather little of the burning concern with spatial equality that we find in some of the westerners. It may be argued that, working in socialist countries, they have no need to. Yet it is curious to find three Polish contributors predicting for their country an increasing concentration of industrial activity.

Clearly much work remains to be done on relating theory and observation in spatial aspects of economic activity, but Ian Hamilton's two volumes take us the important step along the road.

T. H. BIRKIN

Soviet economy and the West

Productivity and the Social System:
the USSR and the West
by Abram Bergson
Harvard University Press, £12.25
ISBN 0 674 71165 3

Professor Bergson has well known not only for his important contributions to welfare economics, but also for his pioneering work in the computation of Soviet national income, much of it done under the handicap of sparse and inadequate official statistics. More recently he has focused particularly on the comparison of Soviet and Western national income, for its own sake and as a means of forming judgements on the relative merits of socialism and capitalism. This volume collects most of his important essays and lectures on this topic.

The book is in three parts. The first, "Planning and Policy", contains three essays—two early assessments of the 1965 Soviet economic reform, an interesting paper outlining the alternative growth prospects for the Soviet economy on different assumptions about the investment ratio and the rate of increase in factor productivity, and a short recent piece on innovation. Part two is devoted to three papers on comparative levels of output and productivity and part three to four papers on growth rates of output, productivity and consumption (these include Bergson's 1974 Wicksell lectures). There is also a fairly long appendix of statistical tables giving further details of the recomputations undertaken throughout the book. Overall the author would like this book to supersede his earlier set of lectures, *Planning and Productivity under Soviet Socialism*, published 10 years ago.

National income comparisons between countries with the same economic system are difficult enough. Bergson has to contend with problems in coverage and reliability of statistics as well as

the traditional index number difficulties. In 1955 Soviet GNP was about 27 per cent of American GNP, but 45 per cent of American GNP at American prices. When the author compares growth rates of output per unit of factor input further problems arise. Inputs have to be aggregated to form a single number, the growth rate of which can be calculated from the growth rate of output and the increase in factor productivity. Bergson uses constant weights to aggregate the factor inputs, which is equivalent to assuming a special form of the production function with a unitary elasticity of substitution. He derives the weights by imputing to Soviet capital a rate of return of 12 per cent. This is not very satisfactory, especially as recent work by Weinstein and Desai suggests that the elasticity of substitution in the Soviet Union is substantially lower than unity. Bergson asserts that this makes little difference to his conclusions, but it would be interesting to see a complete set of results on the alternative assumption.

What can comparisons of countries tell us about the efficiency of different systems? Bergson emphasizes that he is comparing the levels or rates of growth of production potential, and not of "well-being". But to interpret even these figures one must form a judgement about the relative impact of the economic system of a country on its standard of living and its cultural and historical background on the other. This issue was discussed in an interesting exchange between Bergson and Philip Hunsan in *Social Studies* in 1971. Bergson recognizes that his own approach, based on what he calls "summary quantification" is anything but comprehensive.

As in many volumes of collected papers, *Productivity and the Social System* contains some repetition. Yet it is an excellent introduction to comparisons of Western and Soviet national income. The last satisfactory section is the first part on planning and policy, which can perhaps be construed as a commentary on the findings which follow. The essay on economic reforms is rather slight and inevitably dated. The short note on innovation promises greater rewards for management as the way to stimulate innovation, yet the issue is surely more complex than this. It would be interesting to have a more recent and detailed assessment from Professor Bergson of the state of the Soviet economy.

Martin Cave

THE INVESTMENT DECISIONS OF FIRMS/PUBLICATION DATE 17th NOVEMBER, 1978.

AUTHOR: STEPHEN J. NICKELL, B.A. (Cantab.), M.Sc. Reader in Economics, London School of Economics, 25-26 Bedford Way, London, W.C.1E 6BT.

ISBN 0 7222 0311 2 £11.00 (hard)
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Head title in series ECONOMIC THEORY AND EXHAUSTIBLE RESOURCES by S. M. Heston and P. S. Sargant, published April, 1978. Copies may be ordered from: JAMES NISGOT & CO. LTD., Digswell Place, Watlington, Oxford, OX12 9JL.

BOOKS

Shakespeare in a nutshell

Shakespeare: the poet in his world
by E. C. Bradbrook
London, 1978
ISBN 0 337 77504 9

Reading a book of no more than 250 pages on Shakespeare, after 50 years of Shakespeare studies, might be either a double-edged sword or a double-edged sword. Muriel Bradbrook's book is not quite a double-edged sword, but it is a book that is relaxed and yet alert, and it is not over-enthusiastic. It is a book that is not over-enthusiastic, but it is a book that is not over-enthusiastic.

Professor Bradbrook's oeuvre covers more than 50 years of reading Shakespeare studies, and she has been at it for 46 years of it. She has been at it for 46 years of it. She has been at it for 46 years of it. She has been at it for 46 years of it. She has been at it for 46 years of it.

So book on Shakespeare, however magisterial (and that, though she is a woman), could not be so complete. It is a book that is not over-enthusiastic, but it is a book that is not over-enthusiastic.

T. H. BIRKIN

In defence of literary history

The Discipline of English: a guide to critical theory and practice
by George Watson
London, 1978
ISBN 0 333 23353 0

Discipline and lively book George Watson writes "for those who want to know what is a subject, 'discipline', and in the fullest sense of the word."

The book is in two parts. The first part begins with a denunciation of literary history as a discipline, and then moves to a defence of it as a form of rational inquiry controlled by historical information. This is followed by a backward glance over the years, and a final chapter on the future of literary history.

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of opinion when she is unorthodox she is invariably challenged, and backs her challenge with the sort of background evidence which is never just circumstantial. As a lesson in how to carry your learning without staggering into digressions, this is an exemplary book. She plots her way through the critical fog using her own profound knowledge of the period, with the occasional lamp-post of a remark by Auden, Eliot or Yeats in preference to the professional critics. The book is refreshingly free of the jargon of contemporary literary criticism, and is a book that is not over-enthusiastic.

Some plays inevitably get more space than others. *Julius Caesar* and *Henry V* are barely mentioned, but their near neighbour in time *Hamlet* gets the most space of all. It is a history of Shakespeare, so the book steps from landmark to landmark. The pages on *Othello* and *King Lear* are excellent. She notes of *Othello*, for instance, that it was the first play to make sexual jealousy something other than comic, and links the point neatly to the play's many reversals of expectation. Her central point on *King Lear* is that it is a play that is not over-enthusiastic.

Her vision of *Lear* however does not differ from elsewhere. The rhythm of her view makes her see it as a complete halt in this line of Shakespeare's career. After *Lear*, she says, what was possible? That other complex of his, *Macbeth*, is not a complete halt in this line of Shakespeare's career. After *Lear*, she says, what was possible? That other complex of his, *Macbeth*, is not a complete halt in this line of Shakespeare's career.

Andrew Gurr

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A serious difficulty for students of European history is in bridging the gap between the narrative textbooks available and the interpretative essays they are expected to write. Drawing from personal teaching experience, Stephen Lee takes an analytical approach to a variety of topics in early modern European history, showing a variety of methods that can be used to present a theme or argument in essay form. It is intended that the approach should stimulate thought in the subject and give some structure to what must sometimes appear to student and scholar as an inert mass of facts.

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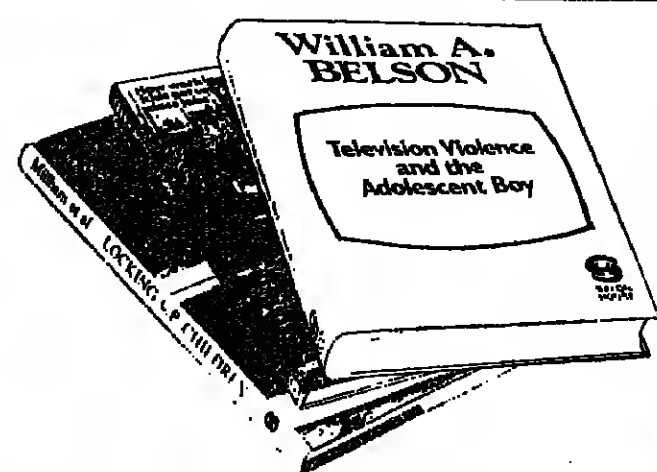
METHUEN

Morris conference

William Morris: aspects of the man and his work is a collection of papers presented at the Conference on William Morris held at Loughborough University of Technology in 1977, edited by Peter Lewis. Jack Lindsay opens the collection with an assessment of Morris in general followed by Peter Lewis on the

W. W. Robson

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Belson's TELEVISION VIOLENCE AND THE ADOLESCENT BOY

News of Belson's study of Television Violence and the Adolescent Boy has already generated fierce debate. Now the full results and methodology appear in print for the first time. The author examines the effects of long term exposure to television violence, the sorts of television violence more likely to produce violence, and the effects of other media on violent behaviour. Belson's findings lend strong support to the case for making major changes in policy concerning the broadcasting of violence.

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Organic chemistry

An Introduction to Organic Chemistry
by William H. Reusch
McGraw-Hill, £15.75
ISBN 0 0162 7161 5
Vogel's Textbook of Practical Organic Chemistry (fourth edition) revised by B. S. Furniss et al. Longman, £17.50
ISBN 0 582 44250 8

The book by William Reusch of Michigan State University is an "introduction" only in the sense that it is written for novices. The author offers it as suitable for use in a one-year course (American style) and claims that he has sacrificed breadth rather than depth of coverage.

Reusch follows the well-tried functional group approach. The greater part of the book is devoted to the usual range of functional groups and the remaining chapters to interacting functional groups, non-ionic organic reactions, proteins and amino acids, carbohydrates, and strategy of organic synthesis. There are three valuable tables devoted to useful reactions for the selective introduction of functional groups, commonly used carbon-carbon bond-forming reactions, and acidity constants and pKa values, along with answers to text problems and an index.

Reaction mechanisms appear throughout the text but remain subsidiary to experimental observation. Spectroscopic procedures are introduced as required. Biosynthetic procedures and natural products (other than proteins and carbohydrates) are covered only briefly. Reusch only refers to heterocyclic compounds in his discussion on aromaticity. He does not attempt to cover their reactions systematically.

It is difficult to judge a book of this kind without using it regularly with a class but a cursory examination suggests it to be a useful text which is no better and no worse than many others. I expect students to have at least one general textbook of organic chemistry—in addition to smaller books on restricted topics—and a student would not go wrong with this one, though it would not be my first choice. If the reader is contemplating a chemical career, a student of this book will find a useful relative I recommend the next book in preference to this one.

Vogel's Textbook of Practical Organic Chemistry was first published in 1948 with second and third editions appearing in 1951 and 1954. It has since become a classic of its kind, a book which has been revised and that task has now been effected by five chemists from the institution with which Vogel was associated. The authors claim that it is their intention to reflect changes in the concepts of a one-volume reference text for undergraduates, postgraduates, and the practising organic chemist. I believe they have succeeded.

The book describes experimental techniques (including chromatography), the purification of 24 solvents and 68 reagents, the preparation of aliphatic, aromatic, aliphatic, and heterocyclic compounds (460 in all) and a similar number of organic preparations, and qualitative organic analysis (227 pages), and also contains physical constants (101 pages), indices, and three appendices. The third edition has been revised to make way for new material, such as the sections on chromatography and spectroscopy and 120 new experiments. The safe handling of chemicals is emphasised throughout.

The book is a good value for money though some students will be reluctant to pay £17.50 for a single text. Nevertheless it is likely to be used extensively by undergraduates, postgraduates, and other research workers and many will want their own personal copies. Copies purchased for libraries or for shared use in a laboratory may well have to be claimed down.

F. D. Gunstone

BOOKS

Adaptations in plants

Plant Physiological Ecology
by J. R. Ehleringer
Edward Arnold, £3.70 and £1.80
ISBN 0 7131 2689 2 and 2690 6

This is one of the latest in the successful "Studies in Biology" series sponsored by the Institute of Biology. In this series several authors appear in line with the emphasis on the editorial requirement for an emphasis on methods, and suggestions for further reading and practical work, within a very restricted length. This book is no exception.

It begins with a short chapter on the definition of plant physiological ecology, which might well have been pruned or simplified to give the very concise definition given by the author in the preface. The next four chapters are concerned with environmental factors, the penultimate with methods of investigation, leaving only the final chapter on plant responses. This unfortunate plant leaves inadequate space to discuss the mechanisms of adaptation which are the essence of physiological ecology.

The chapters on energy sources and material sources (atmosphere and soil) are also too detailed for the level at which the physiological adaptations are discussed. To describe soil profiles when it is only the availability of certain ions at different pH which is discussed subsequently in relation to these particular soil types? It is doubtful whether nutrient cycles are directly relevant to physiological ecology.

The result is that only the last two chapters cover topics which readers might expect to find in a book on physiological ecology and even then the bulk of the information is in small print in large and indigestible tables.

As a whole the book is not very readable, both because of this tendency to cram too much into too little space, and because the continuing figures and tables and numerous references and cross references are not defined; many will not be readily understood by most students, and when Dr. Ehleringer occasionally descends from the stratosphere to speak to the younger reader, this produces a jarring effect. There are a few errors in the text, but these are some rather misleading phrases such as "under P/E conditions" or "accidental supplementation of a major elemental cycle is named eutrophication".

In conclusion, this book should not be bought as a cheap substitute for more comprehensive texts in this field such as Ehleringer's *Environment and Plant Ecology* or *Plant Ecology* or *Plant Ecology*. It bears no comparison. It would be interesting to know to what extent the deficiencies are the responsibility of the editors as opposed to that of the author—within the confines of a brief section devoted to physiological ecology he has done a reasonable job—but the balance of the book as a whole is seriously at fault.

Michael Keith-Lucas

This week's reviewers

Marvin Cave lectures in economics at Brunel University;
T. H. Elkins is professor of geography at Sussex University;
F. D. Gunstone is professor of organic chemistry at St Andrews University;
Andrew Gurr is professor of English

at Reading University;
Michael Keith-Lucas lectures in botany at Reading University;
W. W. Robson is Mission professor of English at Edinburgh University;
Peter Worsley is professor of sociology at Manchester University.

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edited by J. R. Norris, ARC Meat Research Institute and Department of Bacteriology, University of Bristol, and M. H. Richmond, Department of Bacteriology, University of Bristol.

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What is Microbiology? Form and Function of Bacteria; Form and Function of Fungi; Form and Function of Viruses; Form and Function of Protozoa; The Chemistry and Composition of Microorganisms; Dynamics of Microbial Growth; Microbial Metabolism; Classification of Microorganisms; Identification of Microorganisms; The General Organisation of Bacteria and its Expression; Interactions between Phage and Bacteria; The Determinants of Microbial Pathogenicity; Resistance to Antibiotics; Antibiotics in the Microbial World; Bacterial Nutrition. Each chapter is 32 pages long. August 1978. 41.40/20.86

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Holland

A special report on the tertiary sector

Land of the eternal student opens a window on the future

In Dutch higher education affairs it has for a long time now been a case of governments proposing and the universities disposing. Determined efforts over the past two decades by a string of education ministers to streamline the tertiary sector have largely foundered in the face of implacable university resistance to change.

Holland has now taken over from Germany as the land of the "eternal student". Seven and a half years is the average time it takes a Dutch undergraduate to complete his course. It is a situation which has been encouraged by a fiercely independent professoriate—which is also the best paid in Europe. At the same time the 128,000 students at the country's 13 universities form a privileged elite when compared with the rest of post-compulsory education. There is no equivalent, for example, of Britain's polytechnics, and those who do not make it to university have to content themselves with a course at one of the 400 small higher vocational schools, many of which have only about 200 students.

Entry to university is open only to those who have a school leaving certificate from the toughly competitive and selective grammar schools (VWOs); and to become eligible for a place at a highly vocational school students have to have studied for five years at a vocational secondary school (HAVO).

Despite these restrictions about 17 per cent of the 16-24 age group are in some form of education. Numbers have had to be limited in such popular subjects as medicine, veterinary surgery and dentistry. Selection in numerous fixed courses for the past few years has been by a controversial weighted lottery—which is now once again under discussion.

Traditionally, political decisions in Holland are arrived at through debate and consensus. This historic deep religious divides in the country make this inevitable. Thus, government is always by coalition and parties split on both denominational and ideological lines. The coalitions are fragile, with the two largest parties, the Christian Democrats and Labour, often at the mercy of the plethora of splinter groups. The average life of a Government since the war has been around two years.

Yet this continual shuffling of the pack provides a sensitive system to promote the policies of the middle way and produce an overall stability which has enabled a more polarised European democracy.

The consensus has been particularly strong in education. For the past 50 years or so, for example, schools have been on either Catholic, Protestant or "neutral" lines. The Government is obliged to provide a denominational or "neutral" school on the strength of a petition by parents if they can prove a lack of the desired provision in their catchment area. Thus it is not uncommon to find an isolated rural community boasting three primary schools.

This tripartite division is carried over into the higher vocational schools, and it is the zealous and religiously guarded autonomy of these institutions which has prevented their merger into more rational units.

At the university level the arrangements are different. There are the Catholic University of Nijmegen and the Free ("free") University of Amsterdam; the rest of the universities are vested in the state and even the few independent ones are totally funded by the State.

But the fact of being state-run has not meant that the campuses have been in the will of the professoriate. On the contrary, government attempts at change by consensus have led to virtually no change at all. The ship of academe has sailed on serenely as administration and ministerial plan has succeeded in ministerial plan.

Although frustrating to policy-makers and many leading educationalists, the wretched situation has been tolerated because of the affluence of the country, largely fuelled by its natural gas and oil. Now, however, the centre-right coalition of Christian Democrats and Liberals which took over last year, has warned of the need to belt-tighten.

This autumn a dose of austerity was administered. Education lost 300m guilders, much of it through the withdrawal of aid for working youth wanting to study and of money earmarked for innovation and teacher guidance.

And the Government has announced that if the universities will not put their own house in order, it will do the job itself. Overlong courses, overpaid academics and the lottery system are its principal targets.

Already it has had a certain measure of success. It has persuaded the universities except Nijmegen and the Free University to sign a concordat agreeing to take up to 25 per cent more students by 1983 in return for having their budgets pegged in real terms over the period rather than being cut.

Diplomatically, the Education Minister, Dr. Arie Pels, a former economics professor from Amsterdam, who is a member of the right-wing Liberals, says the fact that the universities are able to do this is a sign of their prior efficiency; does not imply they were taking part in a realistic productivity deal.

At present students can in theory study for as long as they like, although there are limitations on the number of grants and loans. A key argument in favour of the long study period has always been that undergraduates are expected to do a research component.



Paul Moorman takes an overall look at Dutch higher education

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Academics have always argued

that they, too, need ample time for their own researches and should not spend more than half their working time teaching (in an "education" as the Dutch call it).

This structure has meant fewer places available than would otherwise have been the case and, it is being said, the production of undergraduates who were often not well qualified in their narrow field to fill the appropriate places in the shrinking job market. It has led, according to progressives, to laziness and privilege—for those who can afford to play students.

Dr. Pels's proposal is for a four-year undergraduate course followed by an additional one or two years for research or further professional training for those who would benefit from it. Additionally, there could be a certain amount of widening out at the end of the first year, which would be preparatory in nature.

This coming week the plan is being discussed for the first time by a Parliamentary committee. Predictably, the universities have dismissed it as "unworkable". They point to the greatly increased teaching load (no extra money is to be made available under the four-year agreement), to the additional students on top of the expected 25 per cent increase who might claim the shorter courses made room for them, and to the damage to quality—both to the students and to the academic staff—because of lack of research time.

Under the two-tier plan ("we need to move to the Anglo-Saxon model", says Dr. Pels) about 26 per cent of undergraduates might go on to do one further year or 14 per cent to do two years. If it is thought that around 7 per cent would eventually be taken on as research assistants.

At present there is no PhD programme in such. Academic prizes and their distribution while working, and it is this which gives further emphasis to their claim for research time. But it is hoped that two postgraduate years would allow a solid foundation for a thesis to be written after perhaps three years as a research assistant. That, by Dutch standards, would be almost indecently quick.

Old university lions say the Minister has no chance of pushing his proposals through. The universities are now insisting that they should be allowed to introduce the five-year courses which they advocate under such protest; but it is generally recognized that this is a delaying tactic to avoid talking about four plus two. The next election is in 1981; and as one senior university administrator cheerfully put it: "We are waiting for the new Minister."

Two main reasons make the universities so unwilling to change. They feel that with the constantly changing governments it is they who know their business best—and they are strengthened in this belief by the fact that ministers themselves often come from the ranks of the professoriate, bringing their well-remained in many senses almost baronial—in spite of the fact that in 1970, in the wake of the 1969 upheaval, the then government did manage to enact a law splitting decision-making in the University Council, the top policy body, three ways between academics, students and ancillary staff.

In particular, the professors are bolstered by the enormous salaries they earn. These go up to 120,000 guilders a year—more than £30,000 at current exchange rates. Senior lecturers can make up to 84,000 guilders and associate professors up to 100,000 guilders. Junior lecturers usually get a little under 40,000 guilders.

Even by Dutch standards this puts academics in the front rank as salaries go. Understandably there are fears that such a strong position, secured after the war, will be lost.

continued on page 16

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John Richardson looks at the vexed question of selection Looking for ways to end the 'numbers racket'

The question of university selection has been a nagging problem which Holland's former Socialist-led coalition government failed to solve. The temporary university enrolment Act of 1972, which introduced the controversial weighted lottery admission procedure for popular subjects, was intended only to give two years' breathing space in which a more permanent admission policy could be established.

The Dutch practice of seemingly endless debate in the search for consensus before operational decisions may be taken is still in progress, although a new Education Minister Or Arie Pals has said there should be some decision taken in the near future. He has indicated that he is in favour of a movement away from selection by chance to selection by ability.

In principle, any Dutch pupil who has successfully completed the six-year secondary school course is eligible for admission to the first year courses of the universities and technical high schools as well as those of the seven theological colleges.

The standard of the final certificate which ends the national six-year pre-university secondary school course—taken at the "gymnasium" and "atheneum"—is relatively high. It can be compared with the "abitur" in the Federal Republic of Germany, the "baccalauréat" in France, and—despite its greater breadth—British A-levels.

In form, it has some similarity to the international baccalauréat and indeed the Dutch certificate is a single document. Each pupil chooses a study packet of seven subjects, is given a score out of 10 for each in the exam, and must average at least six out of 10 on the total package to pass. In extreme cases this can result in pupils being held over sitting in the senior forms in the secondary schools reopening in the sixth year of their course in order to increase their average to the point where the certificate can be awarded.

The higher education institutions do not hold entrance examinations. Admission to the first year is solely on the basis of the upper secondary diploma, or equivalent foreign qualification, which must include passes in those subjects which correspond to the disciplines the student intends to follow in higher education.

Admission to the lower status colleges of advanced vocational education requires at least a diploma from the first year courses of the higher general secondary schools (HAVOs). But, unlike the universities, the leaving diploma does not give the prospective student the right to enter the colleges, which are free to select according to their own criteria.

Because the demand for some university subjects exceeds supply, the legal right to university education for the etheneum and gymnasium graduates averaging over six points does not lead to a completely free choice of course.

For the past decade a pragmatic Dutch compromise has led to some study directions being subjected to "temporary" restricted entry numbers and regulations.

The most frequently affected subjects have been medicine, veterinary science and dentistry. Graduate professions which in terms of both status and their scale of

financial reward stand out, even in the academically favoured upper stratum of Dutch middle class society.

There is much dissatisfaction with the numerous clauses situation, although feelings do not run quite as high as in West Germany where last year 850 students gained entry to the Vahlth of the West University of Medicine, the medical faculties, by taking courses within based on complex mathematical formulations enforcing their legal right of entry. Prosperous new professional subgroups, the mathematically accomplished numerous consensus advocate, is establishing itself.

This year in the Netherlands, after it first appeared possible that 16 courses would have to be subjected to the quota system, Dr Pals, acting largely on the advice of the academic council (the senior advice body for higher education), decreed that the numerous clauses should only apply to 11 lines of study.

The subjects affected in September, 1978, were: medicine (1,200 out of 4,279); dentistry (1,200 out of 4,279); veterinary science (175 out of 778); physical education (129 out of 129); biology (934 out of 1,226); pharmacy (293 out of 402); physical geography (97 out of 1,331); education (1,581 out of 1,831); history (1,917 out of 1,151); English (618 out of 669); and Spanish (210 out of 269).

It is not only the medical and para-medical faculties which are now under pressure from what still appears, in the Netherlands, to be an ever-swelling stream of applicants. Trade unions, which side with the also over-subscribed, are arguing that the numerous clauses could be ended by voting the employment of more staff to the public faculties, or worried that this year's social science subject has been affected for the first time.

Other subjects which are likely to be threatened in the near future include law, Dutch, French, the history of art, cultural anthropology and political science, as the universities attempt to accommodate 30 per cent to 30 per cent more students by 1983 without any increase in staff.

The increase in the number of first-year students is now running at about 9 per cent a year, with women taking an ever-increasing share of the places.

Social sciences and the arts were the most popular subjects and technical subjects the least favoured by women.

The possible effect of a drop in the demand for places in the late 1980s, associated with the fall in the Dutch birth rate working its way through to the 18 plus age, is a hotly debated topic, especially in Holland, in terms of female participation in the labour force at bottom of the EEC figures—nearly 240 male students to every 100 females.

Selection for the most popular, weighted lottery system in which school leavers with the highest grades are given more chances, this procedure has been defended by arguing that school leaving examinations have a dual role in ending the school course with a qual-

ification useful in employers and supplying an entry ticket to universities. They prize an entry ticket when used to predict the university level success. This ticket is backed by studies undertaken in Britain, including a recent Council for National Academic Awards publication which indicates that A levels are also poor predictors of degree performance.

Facing up to the reality that quotas were likely to be needed for the foreseeable future, the previous Secretary of State for Higher Education, Dr Ger Klein, in 1975 set up a commission under the chairmanship of Professor O. E. Wieringa, head of the new faculty of applied education at the technological university of Twente at Enschede, to advise the Ministry on selection procedures. At that time the Minister favoured a system by which some 80 per cent of places would be divided by lottery and 20 per cent linked to a form of ability testing. The commission's advice on this 80 per cent to 20 per cent compromise was rather pessimistic, only that the "least bad" system stick to was the weighted lottery with those who had exhibited a good degree of learning success.

In March of this year the new Minister of Education appointed his own working group, under the chairmanship of Dr. S. Wiegman, a Professor of Psychology at the university of Amsterdam. The group is now working on a more complex system of selection which could be simply described as offering three different routes into the prized restricted faculties.

The Wiegman report states that in two-thirds of the places affected by numerous clauses regulations should be distributed on the basis of performance into different types of examination.

Those pupils who average over seven and a half points in the final, school administered, examination, and who have studied subjects relevant to the restricted university course, will gain automatic admission.

Pupils averaging below 7.5 points may sit a nationally administered examination, probably to be organized by CITO, the national testing centre at Arnhem. This examination will only be in two subjects closely related to the restricted university course. The candidates choose, and will be voluntary. It is argued that in some ways it will bring more fairness into the procedures because of the greater likelihood of uniformity of standards with a minimal administration, and appears to resemble British A-levels in some respects. The remaining third of the places will be allocated by lottery. The debate continues.

However, arguments in favour of more account being taken of ability in the selection procedures, such as a hoped for increase in uniformity of knowledge and academic potential amongst the first year in the pressured faculties, are likely to carry weight with a minister whose policy is to cut the length of degree studies and raise the productivity level of university teaching staff, without leaving his ministry too open to charges of causing a decline in the quality of Dutch graduates.

'Unrealistically high' academic salaries

continued from page 15

When industrialization and renewal put the best brain at a premium, could be eroded if the government began "downgrading" university work.

As it is, however, tops are now being taken to rectify what are increasingly being seen as unrealistically high salaries.

At present there are 1,800 full professors in the country as against 1,200 associate professors. The aim is to persuade the universities to appoint more of the latter in future: the goal being to have the number of full professors. But it is readily admitted that the process will take a decade to have any impact.

Meanwhile, the higher vocational school sector continues to languish in the cold. Under the previous administration a document had been produced promising one unified system of higher education "in the long term". And Dr Pals, in his statement of intent Higher Education for the Month, repeats that there is a need to integrate vocational schools and the higher

teachers allowed to teach in them are those who have university degrees: a three-year course at one of the new upgraded teacher training colleges is not enough. The problem has been that the universities do not give teachers incentive for a university graduate to go off on a professional training course. Consequently, the vast majority of senior teachers have no teaching training at all.

Under the new government's four years plus two plan this would be rectified. The universities would give a year's "DE" course to those graduates who had decided to become teachers. But that scheme, like so much else in Dutch higher education, is for tomorrow.

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Exchange rates put up price of learning

Nearly all scientific literature in the Netherlands is published in a foreign language: English. And it is aimed at an international market.

This is the fundamental difference between English and Dutch academic publishing: the former capitalizes on the domestic market whereas the latter turns its back on it, due to the small size of the Dutch language area.

A second difference, which Dutch publishers are quick to point out, is that prices at British academic bookshops are "ridiculously low" by Dutch standards. But then foreign purchasers of Dutch academic books are sometimes frightened off by "fancy" Dutch prices: few hardback books come under £15.

What makes Dutch prices steep on a world market, especially in the United States and England, are current currency fluctuations in regard to the strength of the Dutch guilder plus high production costs. Printing costs may not vary much when compared with England, and Dutch binding costs estimated to be only about 20 per cent higher, but wages are high and employees luxuriate in a package of social securities for which their bosses have to foot the bill.

However, due to continued high standards, especially in printing, and a market aided by typical Dutch business acumen, Holland has carved a respectable niche for itself in the world academic book market since the Second World War, with American its major selling outlet.

In fact Elsevier Ltd, a home-grown concern now consisting of a conglomerate of national and international companies, is not only the largest academic publisher in Europe but has conquered the world market in postgraduate information.

Apart from the currency market causing a shaking of heads among Dutch international publishers, there are other clouds over their future fortunes.

One man who has a grasp of the academic market both in Holland and abroad is Paul Nijhoff, Asst. Secretary of the International Group of Scientific, Technical and Medical Publishers based in Amsterdam and made up of 130 publishers from 19 nations. He explained that while research budgets have remained more or less constant the funds for libraries, prime targets for academic publishers, have been whittled down everywhere.

The result is that books are just not selling like they used to, and are lagging far behind the amount of scientific information available. Then, the rise in so-called specialist books, have by their very nature not increased sales to keep production costs down.

Photocopying, too, is also eroding the Dutch publishers' market. Although Holland is one of the few countries which has a law stating that while "personal use" groups may pay a remuneration, the measure can be easily flouted. Mr Asser fears that in the long run this could lead to the demise of certain academic journals, especially small ones and those in the humanities, and jeopardise the flow of academic communication.

Apart from Elsevier, Kluwer Ltd and TCU are in the front line of international academic publishers. Kluwer consists of eight groups of companies and six publishing groups. Its financial backbone is its law and taxation section which may or may not be classified as academic. The academic division consists of nine publishers, including Kluwer-Publishing, formerly Kluwer-Harper, in London, and Bohn, Scheltema and Holkema, which specializes in medicine. The Kluwer holds the academic book market and, like TCU, wants to launch out more on an international level.

Sijthoff and Noordhoff International Publishers Ltd in Alphen aan den Rijn, in the Netherlands, and specialists in English, Statistical and Academic Publishers Ltd in Leiden, a sister company, are modest specialists in the Dutch language.

Corcum and Cent Ltd, in Aachen, North Holland, was originally a printer, but is now a publisher subsidised. As a rule it publishes

Lynn George sees how academic publishers are keeping up standards despite soaring costs

In Dutch, but used foreign authors for the first volume of a series of books it hopes to publish on the Bible's sources entitled *Concordia Remm* (Latin: *Ad Novum Testamentum*). The first book, *The Jewish People in the First Century*, has been widely acclaimed abroad by theologians and historians alike.

The only non-profit making university press in Holland belongs to Pudoc, a centre for agricultural publishing and documents, and attached to the Wageningen "Hogeschool" in Wageningen. Other universities have presses, but these are commercial and usually in the hands of the academic publishers. Of these the Leiden University press is the most important, and comes under Martinus Nijhoff, of the Kluwer organization.

A curious business sideline for Kluwer and Elsevier is that it owns nearly all the important academic bookshops in Holland. This is an historical development: originally these bookshops were mainly private, but when the publishers feared they might lose their selling outlets, the logical step in this, booksellers being pressurized by the big concerns to "push" their books, has, in the peculiar climate of Dutch tolerance and stubbornness, not happened.

Lucas Bunge Publishers, in Utrecht, is the smallest of the academic publishers. In fact it is a tiny one-man business, and has been a one-man business for Dutch medical and biology textbooks. Lucas Bunge, the man, is 49, used to be director with one of Kluwer's medical publishers, but started up on his own in February.

At the age of 16 he stumbled accidentally upon the book business. His mother cut out an advertisement for an errand boy at one of the "better" bookshops and of the "better" bookshops he said: "I don't see something for you?"

He produces cure books in Dutch for university students, and in his standards and attitudes epitomizes a bygone era in publishing.

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THE DUTCH WAY... Information about the broad system of educational development assistance in the Netherlands

How is it financed? Who organizes these courses? And more importantly, to whom are they given and what sort of institution is offered at the institution? This brochure gives much space to the accounts by (ex-)students of the various courses, and government ministers involved in making the money available for them, also record their ideas on this aspect of education assistance to the Third World. The Dutch Way costs £1.

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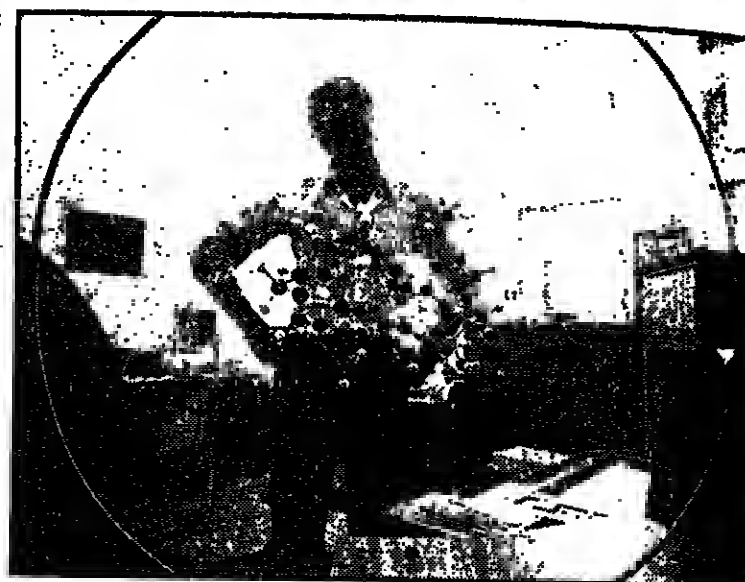
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Two contrasting centres of learning Delft: Keeping up a tradition of engineering excellence



Organic chemistry in the Chemical Engineering Department at Delft.

The Technical University of Delft is the oldest and most prestigious of the Dutch institutions for higher education which concentrate on the training and education of engineers to a scientific standard equivalent to that provided by those universities offering education in a full range of science, arts and social science faculties.

It may be argued that the high status of the engineer in the Netherlands is linked with the obvious significance of civil engineering to a people largely living on land which is below sea level and involved in a constant battle with the sea. A further factor is considered to be the long-established world-wide reputation of the products of the Technical High School, Delft.

Courses leading to the engineer's degree and later in the Doctor of Science are offered in mathematical engineering, civil engineering, geodetic engineering, architecture, mechanical engineering, electrical engineering, chemical engineering, mining engineering, applied physics, naval architecture, aerospace engineering, metallurgical engineering and material science, and industrial design.

The school's closest equivalent in the United Kingdom would be a combination of London's Imperial College of Science and Technology and the Cranfield Institute of Technology.

At Delft the official programme for the engineering curriculum lasts five years but most students take considerably longer to complete their studies.

First-year studies end in most departments with the first part of the preliminary examinations; second year courses culminate in the preliminary part 2. The "candidate's examination", roughly the equivalent of the British BSc degree, but having no legal status as a qualification outside of the Dutch university world, is taken after three or four years of study. After a national five years the post-graduate or doctorate studies, which involve the students in an active period of scientific research, and with the engineers' examination.

Within this "official" course programme a great deal of flexibility exists for the students as to when they really have to take their examinations.

Research done by the statistics department of the Centre for Educational Services at Delft indicates that for that sector of the student population of 1974 which had successfully completed their first-year preliminary examination, only 15 per cent had actually done this within the national one year period allowed.

Further research shows that of a typical student generation at Delft, 90 out of 100 students continue studies on their original course programmes without internal changes of study direction, and 10 change courses. Of the majority group 60 successfully complete their course and graduate as engineers, whereas for those that change courses only five out of 10 graduate. This gives an overall 65 per cent pass rate and a 35 per cent combined failure/drop-out rate.

Of the 35 out of a typical 100 leaving Delft without a diploma, which on the face of things implies a great waste of expensive resources and individual opportunities, 16 go directly to jobs and 19 continue in some other form of full-time education. Of the latter group, 12 go on to some other university or technological high school of university level, and seven to colleges of higher professional training or other full-time training opportunities. The colleges offer courses which in comparison with those of the technological universities and Twente have a smaller theoretical and greater practical component. Of the 19 that have continued their studies after drop-out, 10 eventually achieve an engineering qualification of some kind.

Confronted with the rather simplistic evidence of a 35 per cent failure/drop-out rate, in comparison with a national universities' failure/drop-out rate of just over 25 per

cent, with its implications of inefficiency, Professor F. J. Kiers, a materials scientist just beginning his two-year term of office as Rector Magnificus, pointed out that the technological university had to accept prospective first-year students who had graduated from the Dutch gymnasiums and other secondary (grammar) schools without interview or indeed any other selection procedure. Despite general evidence across a broad range of school subjects and university disciplines which indicated a confusing picture as to the relationship between grades in the school leaving examinations and university level course success, experience at Delft tended to show that there was indeed a link between low grades in the mathematics and physics at school leaving level and failure, drop-out and length of time needed to complete engineering studies, in which a high degree of numeracy was a vital prerequisite.

On graduation the Dutch engineer is considered fully qualified to practise his profession. The results partly from the length of his study period but also because of the periods of work experience which are built in to the course.

Early in his studies the aspiring engineer must undergo a period of work experience on the shop floor, and in the post-graduate research training the student works as a professional man on practical problems of industrial and social relevance. Opportunities for practical work experience abound exist, and are usually coordinated by the international association for the exchange of students for technical experience.

Mr N. Schwarz, Rector and Vice-Chairman of the executive committee, emphasized that the key to success in policy, in attempting to meet the ever-increasing demands on Delft in a framework which appeared to deny possibilities of significant increases in resource provision, was innovation in co-operation with external bodies.

Joint planning with other educational institutions such as Leyden University, the Erasmus University of Rotterdam, the other technological high schools at Enschede and Eindhoven, and the Dutch colleges for higher professional training in engineering with their four-year practically oriented courses could lead to fruitful rationalization and the streamlining of engineering education to the benefit of all national and European interests.

The Rector also stressed co-operation with industry, and hoped for a more aggressive approach from outside society towards the university. He said that he was a believer in "technology pull" rather than "technology push".

The Delft technological university has, in the past 10 years, established multi-disciplinary centres in order to meet the demands imposed by society in the fields of external collaboration, and the coordination of integrated approaches to teaching and research.

The Centre for Medical Engineering, helps coordinate projects in which, among others, work the

departments on mechanical engineering, electrical engineering and applied physics, and the inter-university reactor institute.

The inputs of the departments of civil engineering, architecture, mechanical engineering and electrical engineering are brought together in the Delft Centre for Transport and Traffic Systems.

The Centre of Environmental Technology was founded to help collaborate the efforts of the departments of civil engineering, architecture, mechanical engineering, big, chemical engineering and chemistry, and applied physics.

Research in management and organizational problems is undertaken by Delft's Centre for Management Science and Instruction, and control engineering projects are headed by the Centre for Instrumentation and Control Engineering.

In his expressions of keenness to strengthen links with industry and outside society as a whole, the Rector was refreshingly critical of the close industrial contacts built up by Imperial College, London, and the Massachusetts Institute of Technology.

Delft is one of the 10 higher educational institutions which have recently signed a five-year "rolling" planning agreement with the Minister of Education for the period 1979-1983. It would appear that Delft is in a rather favourable position to weather this particular five-year storm.

No technological subject has yet been threatened by a university clause restricting entry regulation to cope with high student demand—perhaps because of the lack of popularity of technological subjects resulting from the anticipated mathematical rigour of the disciplines concerned.

John Richardson

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Limburg: Coming in from the cold

Attached in a thin silver of territory flanked on one side by Germany and the other by France, Maastricht is the last city one travels south through. By the standards of a country like the Netherlands, Maastricht, about three hours by train from The Hague, is on a geological limb. Psychologically, whole surrounding province of Limburg has traditionally felt itself in the cold, too.

Maastricht, with 165,000 inhabitants, has always been very much closer to the borders of Germany and their neighbours than to the Hague and Amsterdam. That was why the region's feeling of isolationism was so strong.

In the 19th century, when the region was closed down its industry, coal mining, and resources to developing and gas. Even in the times of the story goes, it was not until the 19th century that the region was opened up to the rest of the country. That was why the region's feeling of isolationism was so strong.

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Maastricht's medieval gateway.

deep and almost as soon as they arrive, with clinical work forming part of the things they can do from the first year. They can work with general practitioners, in hospitals, child care offices and industry.

Dr van Boven says: "Traditionally, medical students do clinical years to learn how to apply the basic knowledge they have learnt. With us, they just go along to learn. We don't separate the basic from the applied."

Thus, doctors often complain of the unpredictability of the range of knowledge of Limburg students: some may have concentrated in their studies on certain areas to the almost total exclusion of things that students in other medical schools would learn as a matter of course in their first or second years.

There are complaints, too, that Limburg students often refuse to do the mental tasks traditionally expected of "learners" doctors "being allowed to see a slice of real action for the first time."

Curricula are divided up into six-week blocks, with each block concentrating on a special area such as anatomy or physiology. In the first year, students follow up whichever parts of the project interest them most.

Progress measurement is based on continuous assessment with a test being given four times a year. The test, interestingly, is the same for both first and sixth-year students.

Students are simply asked to do as much (or little) as they can of the tests. In the beginning they will score practically zero and by the time they are finishing their course it is expected they will be up to around 50 per cent.

By this method, staff are able to chart a progress curve and point to areas which they think a student may have been neglecting.

"We are undoubtedly looked on by the medical establishment as dangerous radicals," says Dr van Boven. There is little, however, that anyone can do about it. If they think standards are being abused.

Under Dutch law, the medical schools are charged only with "producing doctors who are capable of practising". And there is no overall monitoring body to decide if this is the case. Each university is its own master in deciding competence.

Limburg has, of course, not had any graduates so far. The first are due early in the 1980s. But no one is in any doubt of what a Limburg-trained doctor's characteristics will be. He will probably be a GP and be better equipped to deal with "ordinary" problems than other doctors. He will know which specialists to consult and when; he will have a keen awareness of the social and psychological and environmental factors connected with illness.

It is this constantly recurring emphasis on society and illness, on the psychosomatic, which makes Limburg's critics refer to it as a place "for souped up social workers."

But Dr W. H. Wijnen, chairman of the department of educational development and research, is insistent that a thorough grounding in basic medical skills is an essential part of the training.

Paul Moorman



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Research programmes to be protected as university expansion crisis looms

by John Richardson

As Dutch universities prepare to face a bleak future, with a 30 per cent increase in undergraduates and no matching expansion of staff and other resources, steps are being taken to ensure that research and scientific services to society other than teaching are protected.

This year's Ministry of Education policy statement on budgetary provision for higher education, *Intended Tasks and Resource Allocation 1979-1983*, has formed the basis for discussions which have led to 10 of the Netherlands institutions for university level teaching and research signing a five-year "rational" budget agreement with the Ministry.

The policy statement advocates that 40 to 60 per cent of a university's resources should be devoted to teaching, a minimum of 28 per cent and a maximum of 48 per cent to research, and 12 per cent to other tasks such as providing consultancy services to industry and commerce and members for government and para-statal advice commissions resembling the British "Quangos".

The main criteria for budget allocations are the number of students, the nature of the teaching activities, the weight of other tasks such as research and consultancy services, and a series of agreed norms to fix the proportion between "scientific" staff involved in teaching and research and "non-scientific" staff largely involved in various support services.

In the setting up of the plans for the period 1979-1983, staff/student ratios are used as financing norms. These norms differ according to the nature of the university discipline, but not by institution. In other words, the cost of educating a student to degree level in a particular subject must be the same wherever the student takes place. In these calculations the part-time students make up one full-time equivalent.

The Ministry of Education development plan for higher education shows that in 1977 27,900 students had an allocation of 1,480 "scientific" staff for educational tasks, giving a staff/student ratio of 1:18.8. For the science faculties, 11,900 students had 1,450 educational staff giving a ratio of 1:8.2; social sciences had 27,600 students with 1,530 staff, a ratio of 1:17.5; medical faculties 13,400 students, 1,120 staff, ratio 1:11.9; and technological subjects 12,000 students, 1,330 staff and a ratio of 1:9. In total, 32,800 students had 6,950 scientific staff members, giving an overall staff/student ratio of 1:13.3.

The forecasts for 1983, according to the 1978 policy statement, envisage a 52 per cent increase in arts students over the numbers for 1977, and allow for a 15 per cent increase in the education staff time of these faculties, giving a likely staff/student ratio of 1:24.8. For the sciences 29 per cent more students are expected to be taught by 7 per cent less staff, with a ratio of 1:11.4; social sciences with 26 per cent more students and 13 per cent

more staff will have a ratio of 1:19.6; medical faculties with 1 per cent fewer students and 4 per cent less staff will have a ratio of 1:12.4; and technological studies with 21 per cent more students and 6 per cent less staff, a ratio of 1:11.9.

In total, in comparison with 1977, 30 per cent more students will be taught by a scientific staff which has increased by only 3 per cent, giving an overall staff/student ratio of 1:16.9.

However, partly by means of a hoped for 5 per cent increase in the productivity of Dutch firms, research is to be maintained as at least the same level of manpower input as for 1977. A vital aspect of this policy is the treatment of research as a factor separate from the provision of education and other university tasks.

In 1977 Dutch universities devoted to research 5,123 men years, 32 per cent of all available scientific manpower. The arts faculties spent 36 per cent of their total time on research; sciences 38 per cent; social sciences 33 per cent; medicine 25 per cent; and technological subjects 34 per cent.

The 1983 forecast allows for an overall 1 per cent increase in manpower input for research tasks, with an increase for the arts; a 2 per cent increase for the sciences; a 1 per cent increase for social sciences; a 5 per cent reduction for medicine; and a 6 per cent increase for technology with its vital industrial role.

The norms to be used for the fixing of the number of "non-scientific" support staff quoted in the 1978 policy statement are those for the revised budget for the universities of 1975. All institutions of higher education are allowed a minimum of 100 support staff for their central service department such as personnel affairs and book-keeping, then more staff in proportion to the number of their "scientific" staff fixed by the weighting of the education, research and other social tasks of their particular faculties.

For every scientific staff member in a theology faculty, 0.43 non-scientific staff are allowed; for a low faculty staff member, 0.49; for a medic, 1.03; for a dentist, 1.37; a mathematician or a physicist, 1.20; an arts don, 0.48; a social scientist, 0.59; an economist, 0.42; a vet,

2.29; an electro-technologist, 1.86; a chemical technologist, 2.26; a mechanical engineer, 2.36; an architect, 1.10; and all other scientific staff may be supported by 1.1 non-scientific staff.

It is clear that both in terms of future staff/student ratios and the continuing support staff, the education policy-making of the 1980s recognises the significance of the role that research in hard science and technology must play if Holland is to continue to afford the government expenditure which makes her one of the world's social paradises, as the profits from the sale of natural gas decline.

It will be interesting to see if higher education, one of the most expensive consumption items of the above-mentioned social paradigm, can be harnessed more effectively to the task of providing the basic knowledge necessary to create the wealth needed for its own existence. Perhaps higher education will perform better or at least more explicitly in its wealth creating functions, during the onset of high technology based post-industrialism.



Research work at the Technical University of Delft. Top: gastromotographic mass spectrometry in the Department of Chemical Engineering. Above: nuclear magnetic resonance in the same department.

The £700 set of books which an oil company gave away

continued from page 17

high quality information, world recession bypassed Elsevier's turnover, as the concern is continually finding new markets.

Last year, the division published 305 English language primary level journals at postgraduate level, covering such fields as agriculture, social and earth sciences. In the same year it had a list of 4,000 titles, including more than 400 new titles and more than 300 reprints.

The scientific publishers, like other ones, find it difficult to peg academic book prices unless they use cheaper printing methods. Between 20 per cent and 30 per cent of their books are now printed directly from the manuscript, and the trend is growing.

The division works closely with a number of Eastern European publishing houses, as the latter's books are sold by direct mail publicly.

One of the most interesting, old-established publishers and printers is Brill Ltd, of Leiden, which also owns bookellers in Museum Street, London.

It began as a family firm in 1883, and in 1890 E. J. Brill, the family printer, took it over. Now it is a limited company producing highly specialist books, sometimes in limited editions on Oriental and classical studies; for an international group of scholars. On a less academic level, it also publishes the first Dutch version of *Alice in Wonderland*.

It publishes about 150 new titles a year, and as the books are so specialised reprints are rare. About half the books are commissioned by Brill, and the majority of its authors are foreign. The books cost anything up to £150 each and are sold by direct mail publicly.

Mr Thomas Edridge, a Navvies' teacher in England, is assistant director of Brill. The interesting part of the business and its oldest, is the printing house, where it can print in oriental and classical languages.

"We publish things that other people would not think about publishing. For instance, if someone came to us with a Sanskrit text with a Tibetan translation and a Chinese commentary we would be delighted to publish it," says Mr Edridge.

No one has yet produced such a manuscript, but Brill has published in two volumes a first critical edition ever published of *Commentaries on the Epistles of St Paul* (Latin title) written by the Bishop of Salomika in the middle ages. The text is in medieval Greek with a Latin introduction.

Indonesia, Brill has still print in Batak, Javanese, and Balinese, as well as in Arabic, Turkish, Chinese and Japanese. One series of books which it has printed in Arabic under the title (translated about the prophet) *Abraham's Concordance* has been a solid gold book for Brill. It had a solid gold bookcase, and gave them to somebody in the Middle East as a birthday present.

Sometimes it gets no scholars' printing requests, and is not proud to climb down from its lofty printing pedestal to print *Hebrew Beer Labels in Arabic*.

Brill's other publishing activities include *Mingosha*, a Dutch classical periodical, and it is now working on an encyclopedia of the Middle Ages and of the Renaissance in 20 volumes, which, according to Mr Edridge, should keep them busy for another 10 years.

George reports on the Dutch Open University Britain is seen as model for second chance education

Dr George reports on the Dutch Open University, which is going relatively well by Dutch standards. With a world already preoccupied with structural shake-ups and tree-felling, an Open University is the least likely contender to trigger off the new wave of education policy-making.

The Open University was decided in March last year. The decision was made by the former prime minister's coalition Cabinet recommendation of a joint committee on the Open School Council and the Higher Education Council.

Dr George was responsible last year for establishing Holland's Open University, which has courses at certain school levels, and aimed at adults and young people with social grounds with limited schooling. The latter are the responsibility of a smaller university. The committee, however, wants to keep the Open University independent of all costs.

The largest target group the Open University hopes to reach are adults over 21 without formal qualifications, but capable of following a higher education course, followed by a second category of adults with the right secondary school diploma, but who have never taken a higher education course. It will also reach a smaller group of higher education graduates.

The Open University is hoping to attract more women students than conventional institutes (in 1975 there were only 31 per cent and 38 per cent women students in university and higher vocational education respectively), and adults from lower social groups (in 1970, 13 per cent of university students were from the working classes).

Dr Maas explained that in all cases there will be no formal entry requirements, although it will be assumed that the level of knowledge students have in the field they wish to study is equivalent to the higher secondary school diploma now needed for certain higher education courses. Applicants will be expected to have at least passive use of one language, preferably English, because specialised books in Dutch are extremely limited. This prospect, which might unnervingly British students, will not worry the Dutch.

What the Open University will actually cost is still a large question mark, Dr Maas said that the aim is to make it cheaper than both university and higher vocational education. This means we should not go beyond 4,000 guilders (£1,000) on average per student. Because costs will be initially high, due partly to

most universities are at the seams, there is, according to Dr George, a real need for a second chance education. "We see the Open University as a competitor for the system, but as a supplement."

He hoped that the Open University would provide an alternative to study at their own universities, and may make the new programmes planned for universities more acceptable although the university should not be an "overspill" system.

Professor Maas announced that the Open University could start in the second semester of 1981. Although this is a second starting date (an Open University was first proposed in 1969, and the ways and means of its implementation were discussed in a separate Act, and a separate character of the Open University is now being developed), it is a significant step.

Dr George said that the Open University is not a single, distinguished institution, but a collection of institutions, which will not only offer

the intellectual investment involved in writing course material, Dr Maas explained that the Open University is aiming at courses which attract large numbers of students.

Programmes initially will be chosen from four fields of study: languages, social sciences, natural sciences, and technical sciences. Students will have a great deal of liberty regarding what and when they study. There will be no residential summer courses, as this is seen as tying students down too much in schedules.

Dr Maas explained that unlike the British system, material will be split into relatively small, self-contained courses, with each course taking an average student a trimester if he works six or seven hours a week. It is envisaged that an average student with a full-time job will take two to three years to complete a diploma or a degree. Examinations on a voluntary basis (compulsory for students aiming at a diploma) for the courses will be set three times a year.

Because students can study with the Open University for self-interest, it is envisaged that the Dutch model will be less diploma-oriented than the British one. Students can register for one or several courses or an entire programme. Courses, explained Dr Maas, will also be on three levels: foundation, a middle level, and advanced.

The programme will be split into two phases similar to the present university course. The first phase will be on a level equivalent to three years' full-time study outside the Open University and should take about six years. At this point, a student will award a diploma as yet unutilised, but it could be the equivalent of a bachelor's degree, said Dr Maas.

The second phase of study will lead to a "doctoratus" degree (universally equivalent to an English MA degree). Graduates will also be able to obtain a doctorate with the Open University as well as taking retraining and "refresher" programmes.

The committee has opted for written material as the main means of putting across course material, but is still deliberating on support provisions. Television, because it is very expensive in Holland, is not an obvious choice.

Staff would be recruited mainly from higher educational institutions, who would have to be reimbursed by the Open University in cases of seconded staff. This, together with making use of higher education buildings and other facilities, means that the Open University is very dependent on the goodwill of these institutions.

In fact, the universities feel they have been left out in the cold regarding the initial setting up of programmes. The Universities Council, the highest advisory body and official mouthpiece for the universities, wish to see individual programmes as the responsibility of several higher education institutions, with the Open University falling under the responsibility of a smaller university. The committee, however, wants to keep the Open University independent of all costs.

The largest target group the Open University hopes to reach are adults over 21 without formal qualifications, but capable of following a higher education course, followed by a second category of adults with the right secondary school diploma, but who have never taken a higher education course. It will also reach a smaller group of higher education graduates.

The Open University is hoping to attract more women students than conventional institutes (in 1975 there were only 31 per cent and 38 per cent women students in university and higher vocational education respectively), and adults from lower social groups (in 1970, 13 per cent of university students were from the working classes).

Dr Maas explained that in all cases there will be no formal entry requirements, although it will be assumed that the level of knowledge students have in the field they wish to study is equivalent to the higher secondary school diploma now needed for certain higher education courses. Applicants will be expected to have at least passive use of one language, preferably English, because specialised books in Dutch are extremely limited. This prospect, which might unnervingly British students, will not worry the Dutch.

What the Open University will actually cost is still a large question mark, Dr Maas said that the aim is to make it cheaper than both university and higher vocational education. This means we should not go beyond 4,000 guilders (£1,000) on average per student. Because costs will be initially high, due partly to

most universities are at the seams, there is, according to Dr George, a real need for a second chance education. "We see the Open University as a competitor for the system, but as a supplement."

He hoped that the Open University would provide an alternative to study at their own universities, and may make the new programmes planned for universities more acceptable although the university should not be an "overspill" system.

Professor Maas announced that the Open University could start in the second semester of 1981. Although this is a second starting date (an Open University was first proposed in 1969, and the ways and means of its implementation were discussed in a separate Act, and a separate character of the Open University is now being developed), it is a significant step.

Dr George said that the Open University is not a single, distinguished institution, but a collection of institutions, which will not only offer

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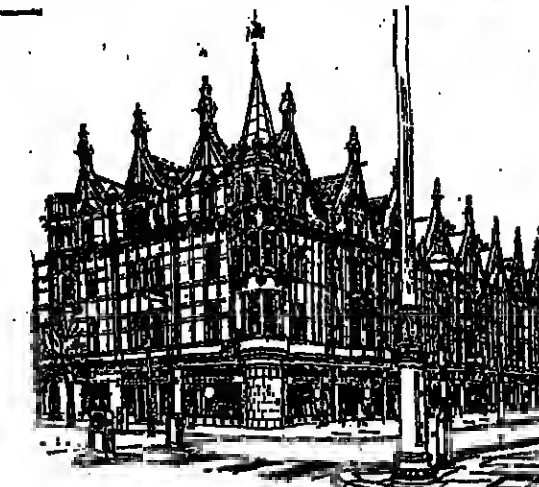
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Protestant in origin, Catholic in taste

A touch of class at Leiden, the 'royal' Dutch university

Paul Moorman finds a taste of old Oxbridge and a continuing concern for quality

Professor Donald Kuennen, the patrician-like Rector Magnificus of Holland's oldest, best-known, and—many would say—best, university does not beat about the bush. Leiden University, in his view, must be a centre of intellectual excellence; or it is nothing.

Thus, he has little time for the mysteries of the weighted lottery system which weeds out students in faculties where the government has set a limit on numbers; nor does he see it as part of a university's role to compensate for the ill-effects of admitting less able students because they come from underprivileged backgrounds.

Diplomatically, Professor Kuennen, a distinguished 67-year-old biologist and ecologist who has just ended his term as president of the International Union for the Conservation of Nature, remains vague about the system of university governance which has been in operation in the country since 1914. Universities Low was passed in 1970 in the wake of the 1968 upheavals.

Under the new Leiden, like all Dutch institutions of higher education, is ruled largely by a university council composed equally of academic staff, students and ancillary workers, plus a number of nominated outside people. The council is backed by an executive board of five.

The impression is strong that the passing of the unbridled power of the professors is something Professor Kuennen regrets. The heavily "managerial" make-up of the executive board, with some members nominated by the government, must reinforce his dislike.

For it is, above all, he emphasises, the quality of its professors which has made Leiden famous ever since its foundation by Prince William the Silent of Orange in 1575, during the 80 Years' War with Spain, to the Protestant clergyman and administrator.

From its earliest days it has attracted scholars like Scudgery, the classicalist who was its first professor of Latin, and Boerhaave, the renowned seventeenth-century physician.

And in this century the physicist, Kamerlingh Onnes, and the historian Huizinga have all served to keep Leiden firmly in the forefront of European scholarship.

Not surprisingly, Leiden began life as a theological institution, a Protestant counterpoint to the ancient Catholic bastion of learning to the south, the University of Louvain (now, of course, part of Belgium).

Arabic, Greek, Latin and law faculties quickly followed. The university still boasts three chairs of Islamic studies and the Muslim connexion recently paid off handsomely when King Khalid of Saudi Arabia donated a magnificent collection of books on Arab themes to the library. Medicine began to be studied at the beginning of the seventeenth century.

Today with 15,000 students, Leiden is the third largest of Holland's 13 universities, after Amsterdam and Utrecht. By far its largest faculty is law, and a chair at Leiden is a traditional stepping stone to the judiciary and the Supreme Court. Indonesian law is especially popular. Oriental studies remain strong and much respected work is being done in low-temperature physics, astronomy and astrophysics. The quality of staff in the sociology faculty is recognized as high but, as elsewhere, the feeling persists that the discipline is still in too clinical a state of development for much useful research to be done.

And research, clearly, is some-

thing on which Leiden places great emphasis. Mr K. J. Carl, the chairman of the executive board, points to the fact that the university can very often tempt professors with established chairs at other places to move to Leiden for an extra salary simply "because Leiden is Leiden."

"It is the atmosphere," he says. "A feeling that there work can be done on with. We are only concerned with quality, not politics, we like Marxists and right-wingers. A few extremists put pepper into things."

Academically, Leiden may be Protestant in origin and Catholic in taste. But its image and reputation is firmly right-wing and upper-class. It is the university at which the members of the Dutch royal family traditionally study. It is a place to which sons follow fathers.

So it is that one notices a strange thing when one visits the "sweet room", the ancient cell-like study where students traditionally wait before being summoned to the final part of their doctoral examinations. The walls and table are covered with the carved and written names of literally thousands of students, the earliest going back to 1641. Among the famous is the signature of Sir Winston Churchill, who received an honorary degree in 1946.

Two aspects have been "revealed" by surviving small plaques into one wall. They are for the two sons of Crown Prince Beatrix—who will study at Leiden "whether they be dunces or not" as one student uncharitably put it.

Sir Winston is not the only British influence in the cluster of 400-year-old buildings skirting the canal and cobblestones of the Rapenburg which form the historic heart of Leiden.

In the former theology faculty, now a ceremonial hall for inaugural lectures, a post-war stained glass window depicting the history of Leiden features Big Ben. It is there, one is told, as "a symbol of what we depended on for our liberty during the Nazi occupation."

Elsewhere around the Rapenburg, the ornate mansions of Renaissance Oxbridge: winding alleys give way to squares, the ancient university court house, where the authorities glowered their own justice to their members free from town interferences, and St Peter's Church, where restoration work has begun with the help of a 500,000-guilder (about £120,000) donation from 7,000 olimnae.

Many of the houses in these cobble streets have been bought

over the years by the university and many have been converted into communal student homes. Nearly a quarter of the 15,000 undergraduates are so accommodated (there is no campus as such and no halls in residence).

This all-pervading university presence in the heart of the town is not, however, altogether pleasing in the city fathers. Despite much talk of jolly tug of war contests between distinguished representatives of town and gown on festival days, the impression is of a rather chilly relationship.

Leiden is a city of 100,000, sandwiched between The Hague and Amsterdam. Its former prosperity was based on the now largely ruined textile industry. It is, by Dutch standards, an area of relatively high unemployment.

The Labour-dominated city council (despite having several university members on it) often sees the university as a parasite. Many of its highly paid academics prefer to live, English-style, in neighbouring villages, shopping either there or in The Hague or Amsterdam.

There is, in fact, too, at the number of houses the university has accumulated. The council is now asking that any not needed for occupation should be handed over to the town for use.

For its part, the university puts its role as by far the largest employer in the area, providing jobs directly for 4,000 local people, as well as 2,000 academics.

Much of the thinking about the future, perhaps inevitably, given Leiden's past, is introverted. Not unnaturally, the university's education and research policy department, set up as a think-tank to look at how best to deal with such 1970s problems as expansion, Government encroachment, democratization, and growth budgets and staff structures, has little time for worrying about how to polish public images.

Successive Government plans to introduce shorter courses for undergraduates are at last beginning to make some impression on the collective university consciousness—although no such courses are as yet actually working.

However, the recent agreement between the Hague and most of the universities, including Leiden, that student numbers will rise by 25 per cent over the next four years while university budgets will be pegged in real terms (without inflation) would have been seen as a concentrated minds wonderfully.

Quite simply, more teaching will have to be done. As one senior university planner delicately put it to describe what many outsiders see as deliberately engineered underemployment of students: "There is a certain amount of elasticity in the teaching system."

Yet there are now genuine fears that existing staff, with the best will in the world, will not be able to cope with the projected increases. One answer would be more lecturers and fewer professors so that extra people could be hired with the money saved. But such a process will have to be spread over years.



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A series of three public lectures on the theme "Europe in the 1980s" has been organized by Heriot Watt University. The first—Towards a Common European Policy—will be given on November 3

RESEARCH. Applications are invited from highly qualified mathematicians to the **RESEARCH FELLOWSHIP** in the Department of Mathematics to work in the field of control theory. Applicants should hold, or expect to obtain, a Ph.D. in mathematics and should wish to work on a topic in applicable mathematics. A knowledge of control theory is desirable but not essential. The Fellowship is University supported and will be for a two years' duration within salary scale 6555-6655 (under review). It is a full time appointment without the half of the scale. Prospective applicants for further details and application forms to Paul Johnson, Educational Officer, Ref: 75-5212, Loughborough University, Loughborough, Leicestershire.

Courses continued

UNIVERSITY OF NEWCASTLE UPON TYNE
M.ED. DEGREE

The School of Education offers one-year full-time courses leading to the degree of M.Ed. by Examination and Dissertation.

Applicants should normally have a degree or advanced diploma, a teacher's certificate and at least one year's teaching or appropriate professional experience.

The following subject options will be available during the session 1979-80:

Single subject courses: History of English Education, Education through Drama.

Two-subject courses (taken in certain combinations): Psychology of Education, Comparative Education, Sociology of Education, Research Methods and Evaluation, Curriculum Theory and Practice, Counselling in Education.

The degree of M.Ed. may also be obtained by Thesis. This involves supervised study in three consecutive terms.

Further particulars and application forms may be obtained from the Secretary, Higher Degrees and Research Division, School of Education, University of Newcastle upon Tyne, St. Thomas' Street, Newcastle upon Tyne, NE1 7UU.

TIBETAN MEDICINE

19th-21st December, 1978

A residential course given by the Tibetan Buddhist monk, Khenpo Jigme Phuntsok, will be held at the University of Newcastle upon Tyne, St. Thomas' Street, Newcastle upon Tyne, NE1 7UU.

Librarians

OXFORD

THE UNIVERSITY OF

MOORE'S LIBRARIAN

The University of Oxford is seeking a Librarian for its new Library of Theology and Religion. The post is full-time and involves the management of a collection of books, journals and other materials. The successful candidate will be responsible for the acquisition, organisation and maintenance of the collection. The post is open to applications from both men and women. The salary is £12,000 per annum. The closing date for applications is 15th December 1978.

Colleges of Further Education

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COLLEGE OF FURTHER

EDUCATION

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Colleges and Departments of Art

NATIONAL COLLEGE
OF ART AND DESIGN

The College has vacancies for the following academic posts:—

Re-advertisement

Head of Department of Industrial Design

Head of Department of Craft Design

Head of Department of Photography

Assistant Lecturer in Industrial Design

First Advertisement

Assistant Lecturer in Ceramics

Half-time Assistant Lectureship in Fine Prints

Salaries

Head of Department (Lecturer Grade 1) £5895-x9-7965

Assistant Lecturer £5260-x9-7350

The half-time post is to be remunerated at half the Assistant Lecturer salary.

Further details and application forms are obtainable from:

THE REGISTRAR, NCAD,

KILDARE STREET, DUBLIN 2, IRELAND

Tel.: 682911

Closing date for completed applications

FRIDAY, 15th DECEMBER, 1978

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THE LEVERHULME TRUST FUND

GENERAL ADMINISTRATIVE
ASSISTANT

The Leverhulme Trust was founded in 1825 and applies its income, currently about £2 millions a year, to the provision of grants, fellowships and scholarships for research and education.

Applications are invited for the post of General Administrative Assistant to provide routine assistance to the Director and the Financial Secretary, to prepare statistical and other information for Trust publications and to deputise for other members of the management staff as necessary.

The appointment, which will be for a limited period of three years, is expected to provide valuable experience to a young graduate contemplating a career in university or similar administration.

The initial salary will be £4,350.

Applications should be submitted in writing not later than 15th December, 1978, to Dr. R. C. Cross, Officer, The Leverhulme Trust Fund, 15-18 New Fetter Lane, London EC4A 3NR.

LONDON, E.C.4

THE CITY UNIVERSITY

SCHOOL OF EDUCATION

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General Vacancies

DONCASTER AREA HEALTH AUTHORITY

Senior Health Education Officer in Doncaster

Scale 9: £4,959-£6,025

A challenging post in the single district Area of Doncaster, offering a keen experienced person the opportunity to increase health education awareness and to develop health professionals, and also to foster health education and occupational group interest in various aspects of health education.

Only we need a person with a broad knowledge of health education

Laurie Taylor



"Well, it... er... looks as though it's about seven thirty so perhaps we should be thinking about making a start. Apologies from Geoff Quinton who's still got a nasty tumour, and of course from Ted Odgers who's at the North Eastern Rack Against Racism Conference."

"Ern, well... it's a bit of a cliché to say that someone needs an introduction, a good wine needs no bush, that sort of thing, but it's still appropriate to say it about our staff. Graduate seminar speaker tonight, Donald Burt is perhaps best known for his classic text on the British Condescension, 'Kind Hearts and Condescension', but I know that I shall always treasure his little New Society piece on British war hero films 'legions in Elstree'."

"Anyway... Sorry, Donald, do you want another drink? No? OK. Fine. Well without more ado as they say, over to you. O—and we usually ask the speaker to do about 25 minutes and then we'll throw the whole thing open to... erm... whoever wants to chip in. OK? Fine. Right. It's all yours."

"Thanks a lot, Ram. Ern... well... I think the first thing to say is that I'm not really going to give a paper tonight. I'll be using the title of my talk—'British mystery films since Edgar Lasker's'—and I'll be sounding the alarm against which to bounce a few of the ideas that I've been playing around with over recent years. Some of these ideas, or thoughts if you prefer, are deliberately provocative—what I like to call 'Rouse and Tattle'—and others are more basic ideas—what I like to call, if it sounds a bit pretentious, too much like pinning the proverbial cloth before the nurse—what I like to call, 'Basic Ideas'."

"As you see I'll be referring to notes—these pieces of paper here—but I won't be so much reading them as glancing over towards them from time to time and using them more as a sort of stimulus for free association. If you don't mind me putting it like this, I'll be talking to my paper, rather than about it. Neither, and this is something slightly experimental, will I be attempting to put anything that I say in any particular order. I don't want to get hung up on all the logical and epistemological problems which inevitably crop up when you start collating something, a beginning, or a middle, or an end. After all—and I'm sure this is old hat to the philosophers among you—what exactly is it that constitutes an introduction? Is it something intrinsic about the content, or—and I don't want to get bogged off on this particular tangent of the moment—or is it merely, merely, determined by the temporal position of the statement? I mean, supposing I were to put together a lot of words now which suggested that I had concluded, would it be treated as a conclusion despite its evident temporal inappropriateness? For example, what might be the response if I said... erm... yes... So there we are that's all I want to say tonight?"

"OK. Fine. Thanks a lot, Donald. I think I can safely say that you've gone a long way towards shaking up one or two of our treasured preconceptions, and by the way thank you for keeping it all so refreshingly brief. What'd like to kick off and Scarborough and dropping off at Leeds and Lancaster Universities would improve their perspective."

Your loquacious writer, and in judge from his article on Seapod (November 10) James Parker seems unaware of developments which have been going on for years beyond the confines of London and Berkshire. A brief tour of the North isle in Ambleside, Sanderfoot and Scarborough and dropping off at Leeds and Lancaster Universities would improve their perspective."

I wonder if I could be a bad chairman for a moment and skip in one little thing that was rather troubling me. At the beginning of your talk you seemed to be saying...

LETTERS TO THE EDITOR

Teesside and Dr Suddaby

Sir—While Dr Suddaby's article (THES, November 3) raises some important general points about the role of the CNA, his use of evidence relating to Teesside Polytechnic is suspect and potentially damaging to the interests of those most vitally affected by the problems facing the institution.

It is not satisfactory to quote staffing figures for 1980 full-time equivalents, as Dr Suddaby does, as if all polytechnics are sufficiently alike to be taken as a single group. Quite simply variations in overall size and in site number result in significantly different establishment patterns. Equally, the quality of staff (the grades involved) is as important as the quantity.

Similar shortcomings can be seen in Dr Suddaby's use of figures relating to expenditure. Ignoring the fact that the CDP has been highly critical of the data contained in the Polytechnic Finance Officers Group report, one must question the validity of using figures relating to a single year. While it may be true that in 1976-77 expenditure per student on books may have been relatively high it does not follow that the level of expenditure in absolute terms was adequate to meet fully the needs of those courses being offered at Teesside. Nor does the performance in one single year counter the CNA observation that the level of expenditure in the library had been problematic ever since 1970.

Finally, the use of average expenditure figures creates a misleading impression even for the one

	Expenditure £ p	
	Total Academic	
Teesside	1650	900
Average of 6		
Comparable Polys	1980	1050

Professional teaching

Sir—The main thrust of Harry Webster's response to your leader on teacher education (THES, October 27) is, of course, correct, but sadly the new emphasis on professional education has made possible by reorganization has itself been offset in many institutions by the contraction of its work into two or even one year of four-year degree courses.

Polytechnics do everything they can to provide professional courses of teacher education, but their hands are so tied by the penalties of diversification that they can scarcely be expected to offer much advantage over the postgraduate certificate route to teaching. The fully professional honours degree in education can be sustained only in the close and unfettered relationship of a university and a mono-technic college, and it is to these unions that we must continue to look for creative developments in teacher education.

The search for a true pedagogical institute will, in fact, be short since there are now only eight candidates—the freestanding colleges specializing in the training of teachers, and two of these are likely to have disappeared by 1980.

As for the whole four-year honours degree programme is defined and taught in a professional context, and the importance attached to this can be seen elsewhere in this issue of the advertisement for a Director of Professional Studies. This post has been established at the maximum possible level of seniority in the college.

Your loquacious writer, and in judge from his article on Seapod (November 10) James Parker seems unaware of developments which have been going on for years beyond the confines of London and Berkshire. A brief tour of the North isle in Ambleside, Sanderfoot and Scarborough and dropping off at Leeds and Lancaster Universities would improve their perspective."

under review. Rather than treating all 30 polytechnics as a single group it is more useful as a first step to separate out those polytechnics which are similar to Teesside in terms of student numbers. If one compares expenditure at Teesside with expenditure in six polytechnics with a student FTE of less than 3,000 in 1976-77 a picture emerges which is very different from that presented by Dr Suddaby.

Although the general question raised in the article must not be obscured by local detail it is of more than academic interest that the Teesside situation should be presented in a correct manner. Otherwise with the best of intentions, false impressions may be laid to rest. The article must not be taken as a conclusion about Teesside that could be more damaging to the polytechnic than those conclusions of the CNA that Dr Suddaby needs to criticize.

Yours faithfully,
DAVID TAYLOR,
Senior lecturer in history,
Teesside Polytechnic.

Sir—That the demands an academic staff in polytechnics by validation processes are substantial is hardly in dispute. To attempt to express those demands in financial terms is surely a nonsense. How, for example, does one put a price on the professional attitude of mind which carries the process of the validation and evaluation of one's dully life?

What might well be open to some form of subjective judgement is the staff input to validation relative to the much greater consumption of academic resources by the complex of committee work which, like Topsy, has been growing at a rate out of all proportion to the alleged claims of democracy in the development of polytechnics.

Above all else, polytechnics must be concerned with the quality, standards and credibility of their academic work and to the extent that this requires considerable effort, this effort should be seen as a very worthy use of academic resources.

The Birmingham Evening Mail reported on November 2 that a booklet of the universities whose political indoctrination has created a wave of indignation is being sent to the Home Office. The booklet is titled 'The Universities: A Political Guide' and is said to be a 'political guide' to the universities. It is said to be a 'political guide' to the universities.

Sir—On the Monday before my letter (THES November 3) was published, I asked my secretary to ring your paper to confirm that my interpretation of the news item regarding the £10,000 to send a booklet of the universities to the Home Office was correct. She told me that the Editor had confirmed this and would publish the letter.

It emerged later that the matter was more complex than the brief news item suggested and it is very helpful to have the full account of the situation given by the Deputy Leader of Cleveland County Council in your last issue.

I should like to assure him, however, that my words 'arbitrary and capricious' were not intended as a criticism of Cleveland County Council but were applied to the pattern of resource allocation which would inevitably be followed by the system in which local authorities could be put under pressure by reports whose conclusions were not always based on objective criteria.

Yours faithfully,
ARTHUR SUDDABY,
City of London Polytechnic.

undue outside pressures, yet they have not stopped the university from devoting immense resources in the fields of agricultural research and education to serve the interests of agribusiness at the expense of other areas of research. The university have not shielded it from becoming the only one in the nation which designs and manufactures nuclear weapons, such as the neutron bomb; nor has it hesitated to offer academic credit for military training designed by the Department of Defence, taught by military personnel sent to the campuses by the Pentagon and given preferential titles without faculty review.

Finally, the fear that a more candid review process will prevent rigorous future evaluation of the university's performance is unfounded. It is nearly universal practice in the United States for granting agencies and academic presses and journals to furnish scholars with the texts of confidential reviews of grant applications and scholarly manuscripts. The new California open files law merely extends that practice which has worked well to personnel reviews.

The university's published 'summaries' of the substance in the aggregate, which translated means a summary of the gist of a review after a decision has been made with no opportunity to rebut an recommendation has left a department and entered the multi-tiered review system. As for the quality of these summaries, they may not distinguish the results of each level of review so that it is possible for a professor to be supported for advancement, by every level of faculty review, yet to be dismissed by an administrative decision and never know the truth. The summaries I have seen range from the detailed to brief, vague pretexts wrenched out of the administration after an uncomfortable delay.

As for the university's constitutional immunity, it is not absolute. The general rule under California law is that where a policy has been enacted covering state agencies, the university may also be covered. The new law extends an existing California open files policy to the university. Obviously through the budgetary process the state legislature and governor intrude far more extensively into the university than a law that simply guarantees promotional reviews.

The immunity provisions of the California constitution were put there to protect the university from staff input to validation relative to the much greater consumption of academic resources by the complex of committee work which, like Topsy, has been growing at a rate out of all proportion to the alleged claims of democracy in the development of polytechnics.

One assumes much of the far-reaching based simply an extrapolation from the universities' failures. These are admittedly reliable and are from the longer, second law extends an existing California open files policy to the university. Obviously through the budgetary process the state legislature and governor intrude far more extensively into the university than a law that simply guarantees promotional reviews.

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Letters for publication should arrive by 10.30 p.m. on the day before publication. They should be as short as possible, and the editor reserves the right to cut or amend them as necessary.

Blacklist threat for Warwick

Sir—Readers may be interested to know that certain social science courses (and that at Warwick University seems to be a black candidate) may be heading for a place on a blacklist to be drawn up by employers in Birmingham City Council, which are having a 'political influence' on a second student.

The Birmingham Evening Mail reported on November 2 that a booklet of the universities whose political indoctrination has created a wave of indignation is being sent to the Home Office. The booklet is titled 'The Universities: A Political Guide' and is said to be a 'political guide' to the universities.

Sir—On the Monday before my letter (THES November 3) was published, I asked my secretary to ring your paper to confirm that my interpretation of the news item regarding the £10,000 to send a booklet of the universities to the Home Office was correct. She told me that the Editor had confirmed this and would publish the letter.

It emerged later that the matter was more complex than the brief news item suggested and it is very helpful to have the full account of the situation given by the Deputy Leader of Cleveland County Council in your last issue.

I should like to assure him, however, that my words 'arbitrary and capricious' were not intended as a criticism of Cleveland County Council but were applied to the pattern of resource allocation which would inevitably be followed by the system in which local authorities could be put under pressure by reports whose conclusions were not always based on objective criteria.

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Why CNA must survive

The letter by "Is rapidly becoming" is a description of the present state of the controversy about the CNA. It is a description of the CNA's role in the present, and it is a description of the CNA's role in the future. It is a description of the CNA's role in the present, and it is a description of the CNA's role in the future.

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no evidence in support of the suggestion that the CNA somehow exceeded its powers in its report evidence that it was not. Teesside crunched the figures in the past had left alone. The only new feature of the Teesside quinquennial visit was its harsh conclusion. As the present much wider attack on the powers and role of the CNA develops, it is perhaps sobering to remember what sparked it off—a critical report on a polytechnic. The more favourable reports that preceded this particular one did not provoke similar outcries.

However, in passing it should also be emphasized that the CNA has no power, and does not claim the power, to close Teesside Polytechnic. It merely has the power to decide that Teesside is not an appropriate institution to offer CNA degrees and is unlikely to do so even if the non-university sector of higher education is to thrive. The idea of the council as a nanny to be dismissed as soon as the children grow up must be resisted. It must be resisted, but the temptation of higher education to become more accessible and more diverse, greater coordination, greater—or at any rate more explicit—concern for standards, and greater flexibility in the transfer of credit will all be necessary. Yet only one of the CNA's continuing role in higher education is a vote against a more open system of higher education.

Secondly, the question must be asked of the critics of the CNA: what is the alternative? Is it really likely that any government in Britain would abdicate to general powers over the direction of higher education by allowing a free market in degrees on the American pattern? But two cautions. First, the essential corollary of course approval. Does anyone believe that a free market which would involve many users or winners and wasted resources into the bargain would really be desirable?

The most reasonable conclusions to draw from the CNA's efforts are two. Teesside itself should be allowed to get on with the important job of putting its own house in order in reasonable quiet without becoming a shutecock in the game between the CNA and its critics. When the dust of this particular affair has been allowed to settle and the general principles at stake are examined calmly, it will have to be said that the CNA has done far more good than harm to higher education outside the universities. In these days when universities are very much back in favour and unrole in the public sector is shakier than at any time for ten years, it too should be allowed to get on with its job. Of course to seek to liberalize the CNA's procedures and practices is reasonable and even desirable. To seek to turn the council into an accrediting cypher is neither.

Secondly, it is said that visiting parties are made up of people, often from universities, who have had little experience in the management of large institutions and that they spend a little time in an institution and then make a judgment about its average quality. Again it is easy to sympathize with the criticism but difficult to suggest an alternative. Surely it would not be a good idea to suggest that visiting parties should examine institutions and make recommendations in even greater detail? One persistent, and probably fair, criticism of the CNA is that it is

deal with Unesco. He is by no means an uncritical enthusiast for Unesco. Unesco could be better after a six-year stint as assistant director-general. But he is an enthusiast for humane values and for their expression in global rather than an ethnocentric context.

For the British consensus view of Unesco tells us as much, perhaps far more, about our present attitudes to internationalism and cultural diversity as it does about the performance of Unesco. The British consensus view of Unesco tells us as much, perhaps far more, about our present attitudes to internationalism and cultural diversity as it does about the performance of Unesco.

Paradoxically never been greater in Britain at the very time when Britain has become a more culturally and ethnically diverse society and has embarked, however half-heartedly, on a new association with Europe, a nation we have not inwardly

already too directive and too bureaucratic. Yet although the CNA's current procedures are sound in principle, an abiding impression is left of insensitivity on the part of the council in their application in practice. It is too simple to say that the CNA has sometimes been heavy-handed. There are times, and perhaps Teesside was one of them, when it is necessary to be heavy-handed. The CNA should not be satisfied on its responsibilities to prevent friction with the polytechnic directors. Yet it does seem that at every level, from the chief officer downwards, the council behaved in an arrogant and insensitive way over Teesside. It has been a most damaging episode, not least for the CNA's own survival as a powerful and active agent.

Far in the end there can be no doubt that the CNA must survive if the non-university sector of higher education is to thrive. The idea of the council as a nanny to be dismissed as soon as the children grow up must be resisted. It must be resisted, but the temptation of higher education to become more accessible and more diverse, greater coordination, greater—or at any rate more explicit—concern for standards, and greater flexibility in the transfer of credit will all be necessary. Yet only one of the CNA's continuing role in higher education is a vote against a more open system of higher education.

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Essential ingredients of freedom



Steven Muller

Within the community of American higher education the debate about the use of liberal—usually as opposed to professional—education is not new. It is a debate that has become irresistible to state point of view here, both as to the virtue of liberal education, and its potential substance.

The first definition of "liberal" in the Compact Edition of the Oxford English Dictionary reads: "Originally, the distinctive epithet of those 'arts or sciences' that were considered 'worthy of a free man'; opposed to servile or mechanical." It still makes sense to think of liberal education as that which swarms with, and necessary for, a free person.

The substance of liberal education thus can be said to be material designed to shape and assist the self-confident, free person in functioning responsibly in society. The first ingredient of liberal education is literacy. Today the spoken word and the pictorial image have assumed an importance that far exceeds their role before electronic technology arrived. But neither one nor both together can nor will replace the written word as the primary key to recorded knowledge and complex communication.

Numeracy is virtually as essential for the free self-confident person as literacy. This is especially true in contemporary society which is so dominated by mathematical logic and its technological products, as well as by commerce. Numeracy means more than counting. It includes the ability to recognize and employ sequences and equations to quantify spatial and temporal distances, to calculate predictable causes and effects, to measure and compare magnitudes. Science, industry, commerce and most of the professions move forward by the numbers. A person who is not numerate is as helpless in such a society as an illiterate.

Beyond knowledge of language and numbers, the free person in society must have the capability to understand and choose. Responsible, self-confident choice must be based on information. Today, however, more information is available than any individual can readily absorb. This situation contrasts sharply with that not long ago, when a single, dedicated mind could still master the bulk of available knowledge. Now knowledge has fragmented into specialized fields, each so dense as to obscure its interrelationship with others. To drill students in facts alone thus becomes counterproductive.

First, there are too many facts. Second, knowledge is advancing so rapidly that facts once learnt are all too quickly superseded. Third, the deluge of facts will paralyze and confuse the mind unless some general pattern of comprehension is provided. However, only facts can underpin good information for choice, and therefore access to and use of facts remain indispensable. The dilemma of facts in liberal education can be resolved by the use of new but already accessible technology. Instruction should focus on the relevance of information, the meaning of facts, and their relationships to each other. The facts themselves can be stored and called

up by calculators and computers used by each person. Learning, then, has always been a memory. The learned person once knew essential facts by memory. The sheer number of facts makes this no longer possible, but then it was never absolutely the case. The essential recollection was always that the fact existed and could be checked against memory at the source.

Nowadays, then, a new emphasis should be placed on the existence of facts, their relevance to problems and to each other. Memory should be focused on such material and the needed sources. It may sound like heresy but, when the memory of the computer is available, the individual's own accurate recall of specific facts becomes a vanity, no longer an essential.

Therefore, emphasis should be placed, not on the specific facts acquired, but on the methodology of science, the range of available facts, the interrelationship of human knowledge, and the sources, and their uses. Now educational ground would be broken. Students would learn to use not only the library but the computer.

The use of visual images to reinforce memory and to orient interrelationships would be explored. A new effort would be required to produce an integrated pattern of fundamental knowledge so that its specialized components could then be knowledgeably consulted and applied.

A free and self-confident person must possess not only the information upon which to base responsible choices but a perspective on the human condition that can turn that information into a framework for choice. Throughout the human past, thought and artistry have wrestled with the condition of humankind's existence; and the achievements of this enduring struggle inform the present. Religion, literature, music, and the arts are the sources of each generation's perceptions of the human condition and are therefore part of liberal education.

To be worthy of the free individual, liberal education must, therefore, shape and assist a person to have literacy, to calculate in numbers, to command information on which to base responsible choice, and to achieve an individual perspective on the human condition. That is, to achieve a few essentials may follow from the axioms.

Liberal education can be properly distinguished, but not in practice separated, from professional education.

It does not follow, however—as some mistakenly think—that every student should have both a liberal and a professional education.

Professional education should be reserved for pre-professionals. It does, however, follow that every professional should have such combined education, lest purely professional education should produce merely skilled technicians. It also follows that the non-professional should have a liberal education; and the holding of self-confidence demands that, as part of this process, a degree of specialization should occur sufficient at least to support a vocational orientation if not an actual skill.

Liberal education cannot be appropriately conceptualized as an economic good, any more than can that individual freedom which it is designed to support. The product of a liberal education will consist of an illiterate, numerate, informed and humanely aware prospect for employment, but the purpose of education exceeds the pre-vocational.

The purpose of mass exposure to liberal education is to enhance and widen freedom. It is the highest possible common level, not to degrade the concept and its consumers to an ever-declining lowest possible level.

Also, human self-confidence does not easily survive dependence on the incomprehensible. A free person needs ready and easy comprehension of the technology of everyday life—which—as it happens—is as yet so novel as to be taught only as a specialty. Thus, to avoid the erosion of self-confidence by alienation, liberal education must familiarize the individual with common technology.

Liberal education by itself does not produce a learned person. At best it is a precondition for a scholarly education. The learned mind is the ultimate product of scholarship, and scholarship is still sought and needed only by the few. Instead, liberal education is the foundation for free and self-confident life in a society whose degree of complexity is rivaled only by the abundance of individual opportunity.